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Delivered at the Opening of the Second Annual Meeting of the California Northern District Medical Society, October 18, 1892.

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Gentlemen of the California Northern District Medical Society:—First, let me congratulate you upon the auspicious beginning of this, the second year of the existence of our Society. Inaugurated a little more than a year ago, its growth, and progress, and usefulness, has far exceeded the expectations of its promoters, and I predict that its future will be no less propitious. Imbued with the spirit of medical progress, its members cannot fail to appreciate the benefits of fraternal intercourse, and the mutual advantages arising from an interchange of views upon medical topics.

As a District Society our number is yet small, but within my recollection the membership of the State Society, now numbering nearly four hundred active members, was at one time scarcely larger; and there can be no further doubt that if we persevere, as did the friends of the State Society, in an earnest endeavor to make our meetings instructive, interesting, and profitable, we will ultimately enlist the active coöperation of every physician in Northern California. Accessions have already been received from Sacramento, Yolo, Colusa, and Tehama, and we have reason to indulge the hope at least, that the time is approaching when this Society will embrace among its membership a very large proportion of the progressive, wide-awake physicians of the whole northern part of the State, from San Joaquin and Solano to Siskiyou and Del Norte.

The difficulties of maintaining medical societies in small communities, with a restricted membership, composed of those whose daily contact with one another often provokes more or less strained relations of friendship, is at once apparent. Honest differences of opinion are often erroneously interpreted, and as often give rise to unwarranted and unnecessary feelings of reproach. But among us, assembled here from widely separated districts, and impressed with a common object, these embarrassments need not exist, and as our number increases, and our territory enlarges, the dangers to the integrity of our Society from these causes need not perplex us.

To gain the esteem and respect of the public, we must not only ourselves be respectable, but we must also respect one another. Association strengthens our efforts in this direction, promotes fraternal relations, advances professional amenities, and, moreover, furnishes a stimulus to intellectual energy. A glance over the past history of our art, indicates that the science of medicine does not remain long quiescent; and participation in these conventions, discussions, and interchange of ideas, enables us, in a measure, to keep pace with its progress. Who, then, can overestimate the value of these re-unions?

I trust that our meetings may ever be distinguished by harmony, and a sincere desire for mutual improvement; let acrimonious debate, dissensions, and polemics be avoided; and may our deliberations be marked by such decorum, and high standard of intellectual worth, as to command the approbation of our associates, as well as the respect and confidence of the public whom we endeavor to serve.

Itinerant Charlatans.

There is a class of demagogues—itinerant quacks—travelling through the land, whom the law regulating the practice of medicine in this State, does not seem to reach. They prey upon the credulity of the public, and reap a rich harvest from the deception and cunning imposition which they practise. They are a shameless lot of vagabonds who, by their ostentatious advertisements, attract the unwary, and too often succeed in making otherwise intelligent men and women their dupes. It is my opinion that concerted action should be taken by every medical society in the State to suppress these charlatans.

Whenever one appears in a community, the District Attorney should be invoked to commence proceedings against him, and the medical societies should lend their influence to, and if necessary contribute a fund for defraying the expense of the prosecution. Without a formal complaint, public officers are negligent in their duties regarding these matters. Some one must take the initiative, and unless we are imperative in our demands for prompt and decisive action, it will be long before the country is rid of these boastful pretenders.

I am aware that the people are slow to appreciate the efforts of physicians when interposed in behalf of the public welfare. There is a very strange and almost unaccountable feeling of distrust manifested by the average citizen, whenever a physician, or a body of medical men, advocates any measure for sanitary improvement, suggests means that would lead to his protection from the artful devices of the charlatan, or proclaims against the deplorable consequences of the individual's own misguided conduct. Our best efforts in this direction are often misjudged and attributed to selfish and unworthy motives.

If, for example, we propose a remedy for some public evil, point out the pernicious consequences of some prevailing custom or habit, or suggest measures for the promotion of the general sanitary welfare of the community, we are forthwith charged with a design to "cinch" the public, and taunted with the humiliating accusation of being actuated and guided by self-interest. Nor is this feeling confined altogether to the unthinking and ignorant classes. It cannot be denied that many very intelligent, and well-informed people, are unable to conceal their lack of confidence in the integrity and good faith of members of our profession.

Why is this? Why do we not stand closer to the people, and why do we not enjoy that universal respect and esteem that, of right, should be accorded to so noble and self-sacrificing a calling? I cannot refrain from expressing the opinion that we, as physicians, are in a great measure to blame. Not in a spirit of criticism, but with a desire to elucidate the truth, let me ask—Is our deportment always in keeping with the dignity of the profession we represent? When we can truthfully do so, are we always found speaking well and laudably of our brethren in the profession? Are we ever as careful as we should be in our language and demeanor, in the indulgence of appetites, and in the expression of sentiments, when mingling with the outside world? In our daily contact with the people, do we impress them with the high and exalted nature of our calling, and do we make clear to them that the practice of medicine is a *profession* and not a trade—a life-work of devotion to the amelioration of the ills of mankind, and not a mere money-making occupation?

Let our lives and professional conduct give affirmative answer, and we shall find, in public sentiment, suspicion replaced by confidence, opposition by concord, and the often present feeling of distrust by universal respect and appreciation.

Unauthorized Refilling of Prescriptions.

There is another matter which I deem of sufficient professional and public interest to mention here. I refer to the common practice among druggists of refilling prescriptions without the consent or knowledge of the prescribing physician. The public should be educated to the dangers and non-utility of this custom. Our patients should be impressed with the necessity of obtaining advice before taking or administering medicines, the nature and effect of which they do not understand. In this matter we can not hope for much coöperation on the part of druggists. This renewal of prescriptions is a source of no small revenue to them, and they are loth to submit to innovations that will curtail their traffic.

I am not advised concerning the legal status of the question of ownership of prescriptions after they have passed into the hands of the druggist; nor am I aware that a decision bearing upon the subject has been given by the courts of this State. At all events, it seems clear to me that druggists should be restricted from the indiscriminate dispensing of medicines from prescriptions in their possession; and that the public should be protected, by statutory enactment if need be, from a custom the consequences of which in many instances are fraught with serious evils.

The Medical Society of Yuba and Sutter counties recently passed a resolution declaring it to be the sense of the Society that prescriptions should be refilled only by direction of a physician, and published, for the information of the public, their reasons for such action, a short extract from which I will read.

"Medicines when intelligently prescribed are supposed to have a definite action upon some functional derangement, or diseased condition of the system, and should, therefore, *never* be taken or administered except with reference to their specific effect upon the actual, present condition of the patient. Hence a remedy which meets every indication at a certain period and stage of a disease may, if continued through later stages of the same affection, prove not only inefficient, but positively harmful. Again, a prescription taken with exceedingly happy effect in a certain illness, may be followed by very unfortunate results if repeated at another time, although administered for what may *seem* to the patient or his friends to be a similar complaint. It also often happens that active medicinal agents are prescribed under certain conditions and restrictions, the continued and discriminate use of which would be, to say the least, extremely unsafe. Yet such prescriptions have in many instances within our knowledge been repeatedly refilled and the medicine taken, to the lasting injury of the patient and to the great discomfiture of his medical attendant.

"The following incident, occurring in the practice of a physician in this county, will serve to illustrate the dangers against which we are endeavoring to warn the public. About two years ago a gentleman suffering from a painful neuralgic affection consulted the doctor, who very properly prescribed a mixture containing a small quantity of morphine. The medicine soon relieved him, and when he had finished the contents of the bottle he returned to the drug store and had it refilled. This he continued to do week after week without the knowledge of the physician, and to-day he is a confirmed opium fiend—a complete moral and physical wreck. Many similar instances could be cited. Is it not, then, clearly the duty of physicians to caution their patients against such deplorable consequences?

"It is generally conceded that the proper application of medicines and the time and manner of their administration are questions to be decided in the discriminating judgment of the physician, and that it would be obviously unsafe to entrust them to the morbid fancy of the patient or to the well-meaning, but often ill-advised, suggestions of anxious friends. The public gratefully surrenders the solution of such questions to the medical profession, and to its members they rightfully look for disinterested advice and instruction in all things relating to sanitary matters. It is often easier to prevent diseases and their consequences than it is to cure them; and it is the province of the physician, and it should always be his aim to use his best endeavors, to check any custom or habit which is prejudicial to the health and general welfare of the community, with as much zeal and earnestness as he would strive to limit the spread of small-pox or diphtheria.

"The physician is alone responsible for the good or bad effects of the medicines which he prescribes. It is therefore manifestly unfair to him to permit the unrestricted refilling of his prescriptions without his knowledge or consent. For he is thereby placed in a position of responsibility with regard to a matter over which he can have no control. Medicines intended to relieve and benefit, if injudiciously applied, or continued when no longer indicated, may prove not only injurious to the patient, but their unfavorable effect cannot fail to reflect discredit upon the physician who prescribes them, and thus seriously detract from his usefulness in the community.

"Finally, the habit of refilling prescriptions without advice should be discouraged on the grounds of economy. Everyone who has had much sickness in his family is aware that the drug bill is not a small part of the expense of a protracted illness. Therefore, medicines purchased unadvisedly, and the use of which the physician, when called, may find it necessary to interdict, involves an unwarrantable expense which some, at least, can ill afford to incur."

I trust that this Society will at some future time give this matter the consideration it deserves.

Cremation.

A glance at the excellent programme prepared by our committee of arrangements, admonishes me that I must not occupy much more of your time. In concluding, however, I will venture to speak of another matter in which I feel a very great interest, and which I believe will soon become a subject of such great practical importance, here as elsewhere, from a sanitary point of view, that it will demand our earnest and serious attention. I refer to that process of disposal of the dead known as cremation.

It is scarcely fifty years since hygiene as a science, the causes of the high rate of mortality, and the means of preventing disease, attracted much attention in our profession, and the necessity for sanitary regulations was impressed upon public opinion. The influence of light and air, pure water, good drainage, ventilation and cleanliness as means of preventing disease, are all subjects of comparatively recent study. While they do not yet form a sufficient part of medical education, still there can be no doubt that the beneficial influences of the study of prophylaxis upon the public health, and longevity, have of late years been very marked.

In sparsely settled communities, the question of disposal of the dead does not assume the importance, from an economic point of view, that it does in the overcrowded districts of more populous countries. But looking upon it as a sanitary measure, cremation is of equal necessity in all places and under all conditions. Much may be accomplished by strict quarantine, segregation, and the use of disinfectants in the prevention of contagious diseases; but under the present system of inhumation, there lurks a greater danger than in communion with the sick, for the danger is hidden, and more difficult to guard against. The pollution of air, water, and soil by decomposing animal matter, even in the remotest suburban cemeteries, is an evil of such magnitude, and now so universally recognized, as to demand some safer, more rapid, and less unpleasant mode than Nature's process of resolving such matter into its elements, and in a manner without offense to the living.

Nearly fifty years ago, a member of the British Medical Association wrote a very remarkable work on grave-yards, directing the attention of Parliament to the propagation of disease from decaying or putrifying human bodies, and proving the dangerous tendency of all interments, whether in churches or in cemeteries located near human habitations. This led to the removal of burial places from towns and cities to suburban cemeteries. But with increase of population, and in crowded districts, the relief thus obtained was only temporary. Those distant plots were soon encroached upon by the growth of towns and cities, and with the extension of their limits the same evils were again encountered. Thus it became evident that it was a question of time only when some other mode of disposing of the dead than that of inhumation must be adopted. The possibility of replacing it by a better method has, of late years, enlisted the attention of many eminent men, in America and in Europe.

An English Bishop recently said, referring to the consecration of a new cemetery: "I feel convinced that before long we shall have to face this problem (how to bury our dead out of our sight) more practically and more seriously than we have hitherto done. Cemeteries are becoming not only a difficulty, an expense, and an inconvenience, but an actual danger."

As indicative of the rapid growth of public sentiment favoring cremation, I may remind you that it is less than twenty years since the Cremation Society of England was formed, composed of a very small number of men, and among whom were a few prominent members of the British Medical Association. Since that time cremation has been legalized in France, Germany, Italy, Switzerland, and elsewhere, and crematoria have been erected in many cities in Europe and in the United States, and also by the Brazilian Government at Rio de Janeiro.

Seven years ago I witnessed a cremation at Milan, and I was informed that several hundred cremations had been performed there during the preceding ten years, and that the process was rapidly gaining in favor among all classes. About that time a cremation society was formed in Rome, and I learned while there that its purpose received the support and approbation of the Italian Government, as well as the sanction of the church.

It has often been asserted that the Church of Rome is opposed to any other than the present mode of burial. The progress of cremation in Italy would seem a sufficient proof to the contrary. In fact, I fail to comprehend how an intelligent faith can suppose any Christian doctrine is affected by the manner, or the time in which, our bodies crumble into dust. Ultimately the same result is attained, although the steps of the process may be dissimilar, whatever disposition is made of the body, namely: its resolution into carbonic acid, water, ammonia, and the mineral constituents.

Regarding the subject from the standpoint of utility, no valid argument can be made against cremation. As Pasteur has said, "the practical inferences in its favor are so strong that they need not be enforced." But from the point of view of sentiment, the feeling of affectionate memory of the dead which is cherished by the living, there may be those to whose sensibilities the idea of cremation is repugnant.

To such I would recall the words of Sir Henry Thompson in an article published in the *Contemporary Review*, now nearly twenty years ago, a page from which I will quote. In answering the question: "What has sentiment to urge in behalf of the present process?"

He says: "Let us see what the process by burial is—so far as I dare—for could I paint in its true colors the ghastly picture of that which happens to the mortal remains of the dearest we have lost, the page would be too deeply stained for publication. I forbear, therefore, to trace the steps of the process which begins so soon and so painfully to manifest itself after that brief hour has passed when 'she lay beautiful in death.' Such loveliness as that, I agree, it might be treason to destroy, could its existence be perpetuated, and did not nature so ruthlessly and so rapidly blight her own handiwork in furtherance of her own grand purpose. The sentiment of the survivor on behalf of preserving the beauty of form and expression, were it possible to do so, would, I confess, go far to neutralize the argument based on utility, powerful as it is. But a glimpse of the reality which we achieve by burial would annihilate in an instant every sentiment for continuing that process.

Nay, more; it would arouse a powerful repugnance to the horrible notion that we too must some day become so vile and offensive, and, it may be, so dangerous; a repugnance surmountable only by the firm belief that after death the condition of the body is a matter of utter indifference to its dead life-tenant. Surely if we, the living, are to have sentiments, or to exercise any choice about the condition of our bodies after death, those sentiments and that choice must be in favor of a physical condition which cannot be thought of either as repulsive in itself, or as injurious to others."

THE ULTIMATE STRUCTURE OF STRIATED MUSCLE.

By J. H. WYTHE, M. D., LL. D., F. R. M. S., Oakland Cal. Professor of Microscopy and Histology, Cooper Medical College, San Francisco.

Read before the San Francisco Microscopical Society.

Errors of interpretation are not uncommon in any branch of science, and need to be specially guarded against in histology, since many structures are not only complex in their living state, but are liable to change after death; and although *post-mortem* appearances may indicate living diversities, they may also imply physical or chemical alterations. The various reagents used to differentiate structure may also produce appearances very different from the living state, while the most perfect objectives will only allow us to see accurately that part of the object which lies in the optical plane. These sources of difficulty, in addition to diffraction lines and ghostly images produced by imperfect illumination, render the task of investigating minute structure by no means easy. Yet care in preparation and observation, and comparison with the recorded views of others, will surely lead one in the right direction.

The structure of striated muscle fibre has been a vexed question since the beginning of microscopic investigation, although many text-books, so-called, flippantly describe it, and many other imperfectly known structures, as matters of positive knowledge. Such descriptions hinder the progress of true science. On the other hand, it is necessary to avoid the opposite sentiment of impracticability. Dr. Dallinger, the able editor of the last edition of "Carpenter on the Microscope," declares (p. 974) that "it is well in the present state of knowledge to refrain from conclusions as to the absolute structure of the striated fibrillæ. It ranges itself, from the modern microscopist's point of view, with other striated objects, and will require the possession of lenses of a N. A. twice or thrice that which are now within our reach." Such an assertion, from so eminent a source, is extremely unfortunate. Its tendency can only be to discourage and abridge microscopical pursuits. If this spirit had prevailed in former times, few discoveries in histology would have been reported.

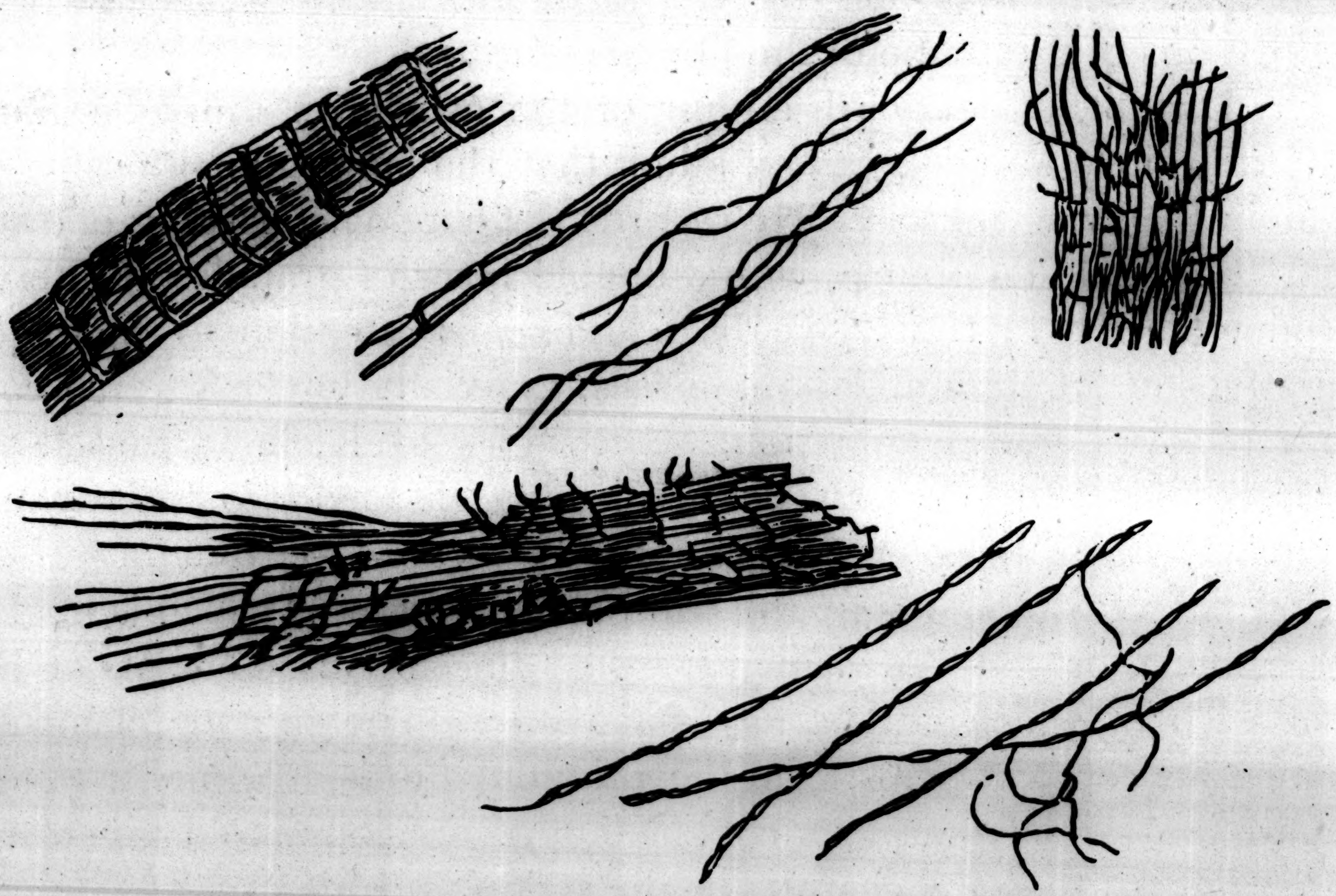
Soon after the microscope was applied to the investigation of tissues, it was found that the fasiculi, or fleshy bundles of voluntary muscles, were separable into fibres, which were divisible into minuter fibres, or fibrillæ. Under some circumstances, such as treatment with dilute hydrochloric acid, the fibres showed a tendency to divide into discs. With a magnifying power of 250 diameters, or more, the fibres also showed alternate light and dark spaces, the origin of which has given rise to much discussion. Bowman, Virchow, and others describe the fibre as consisting of bead-like granules, lying side by side, and the fibrillæ, or discs, to result from the manner in which the granules may be separated, either longitudinally or transversely. A number of granules detached lengthwise form a fibril, while transverse division forms discs. Since some reagents, as alcohol, etc., favor the fibrillar, and others the discoid form, it has been supposed that the intervening cement is of two different kinds. The light and dark spaces in the fibre, or fibrillæ, were regarded by Bowman, Haycraft, etc., as the optical expressions of the shape of the fibrils.

Dr. Dwight, of Harvard, author of the article on muscular fibre in Satterthwaite's Manual, cannot admit that the longitudinal fibrillæ exist at all in the living muscle. He regards the fibre as consisting of a semi-fluid contractile substance, with a double layer of granules at intervals, forming a series of transverse discs. He calls attention to the frequent variations in the dark and light spaces, especially under varying conditions of focus and illumination. According to Klein, a muscle fibre consists of a delicate sheath, or sarcolemma, divided into compartments by delicate dark lines—the membranes of Krause—forming a series, or pile of flat cells, containing the contractile substance, which is made up of prismatic, or rod-like elements, called the sarcous elements of Bowman, each of which is as long as the disc. The sarcous elements of contiguous compartments form the primitive fibrils. Some histologists regard the sarcolemma as a coagulation of an albuminoid layer of the fibre from *post-mortem* change, or the action of reagents.

Shaefer considers striated muscle to be composed of a series of compartments containing a light intermediate substance, in which are imbedded rows of dark, dumb-bell shaped structures extending lengthwise, the refraction of light from the ends of the dumb-bells producing the appearance of the light bands, or striæ, of the fibre. Bruecke, in Stricker's "Manual of Histology," shows that the appearance of muscle fibres under polarized light proves that the sarcous prisms or elements are doubly refractive, while the intervening material is singly refractive, or isotropic. He teaches also that the sarcous elements are made up of groups of smaller doubly refractive bodies, which he calls disdiaclasts. Heitzman adopts Bruecke's view that the sarcous elements do not exist as such in the living muscle, but are molecules, arranged in columns of varying configuration at the moment of death. He teaches that the sarcous elements are connected by filaments of living matter, both longitudinally and transversely.

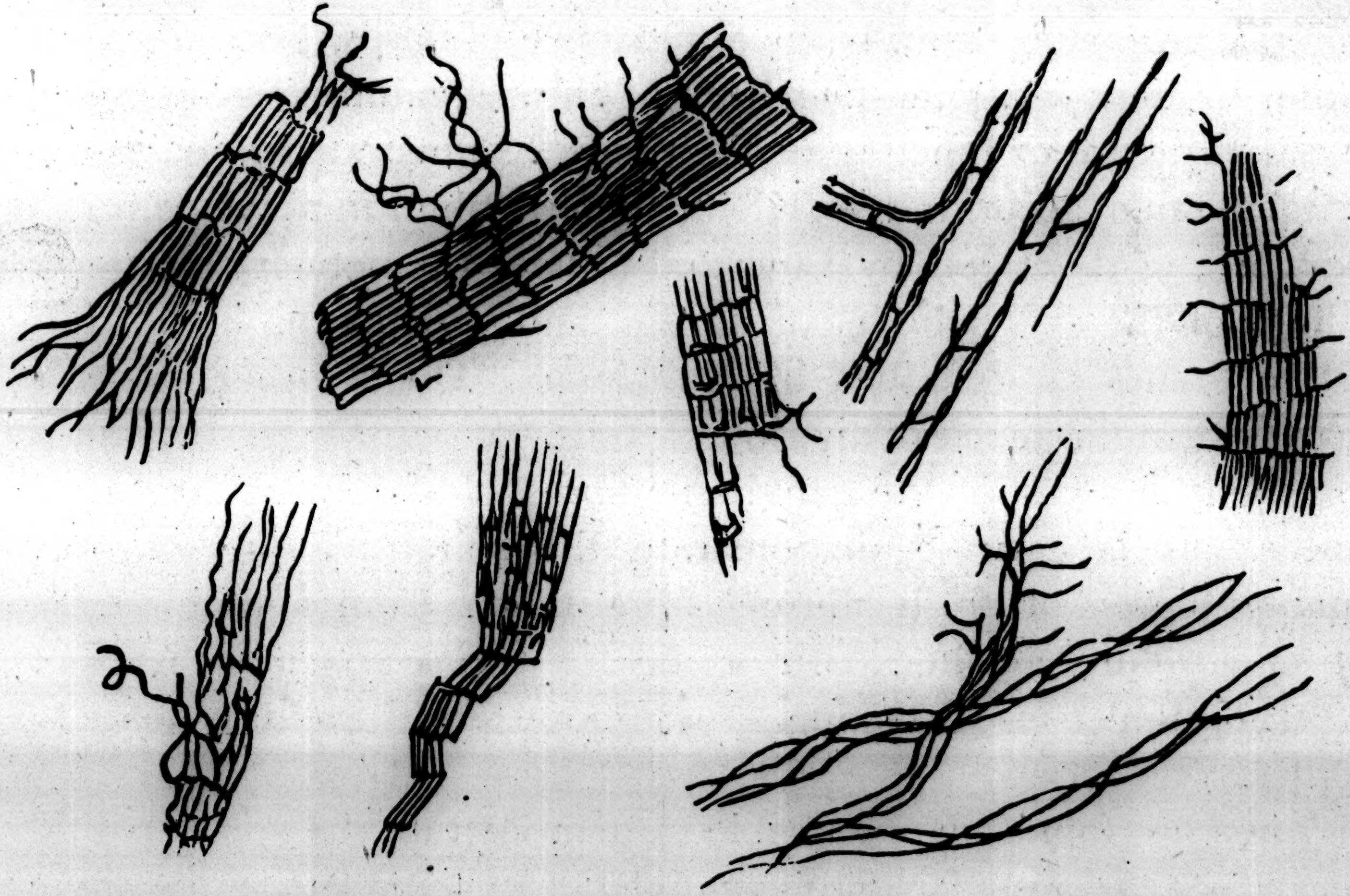
A transverse section through a muscular fibre shows the muscle substance inside the sarcolemma as a semi-transparent material with a network of bright lines forming a number of polygonal spaces, called Cohnheim's areas or fields. These are thought to correspond to the end view of the sarcous elements which appear granular, as if made up of minute fibrils. After death, or hardening reagents, Cohnheim's fields shrink into small circular areas, separated by a relatively large amount of interstitial substance.

Melland, in the *Quarterly Journal of Microscopical Science* for July, 1885, describes the appearance, by his method of gold staining, of a series of reticulated discs connected by longitudinal fibrils. From his observations it would seem that the living, active substance in muscle fibre corresponds to the interstitial substance between Cohnheim's areas, having nodular thickening at the intersection of the lines and continuing longitudinally (as Shaefer's dumb-bells) between the sarcous elements to the adjoining discs, so as to make a series of basket-like reticulations throughout the fibre. I have confirmed Melland's views by staining with gold the interstitial basket-like series of lines in muscle fibre, especially in fibres from the leg of the common house-fly, and from the crab, proving an essential difference between the sarcous elements and the intervening substance.



Voluntary muscle-fibre of crab, teased from alcohol. 1200 diameters.

In other specimens, as in crab muscle treated with alcohol, I have found a still more distinctly duplex structure. By teasing with fine needles, the fibres are seen to be largely made up of longitudinal fibrils, each of which forms a chain of muscle prisms, or elongated sarcous elements, linked together by narrow grooves. Stretching with the needles in many cases makes the grooves to disappear and the fibril to assume the form of a cylindrical rod, often tapering at the end. In addition to these longitudinal fibrils, teasing with the needles demonstrates the intervening substance to be also fibrillar, but generally smaller in diameter, and arranged in spiral form around the others. The intermediate fibrils pass between the longitudinal ones, and after twisting around them so as to form a groove in each rod, they bend upwards again to the next groove, and so on to the end of the fibril. Contiguous grooves in the longitudinal fibrils produce the discoid marks or divisions. In teasing, the needle sometimes breaks off one of the slender fibrils at the place where it binds the sarcous filament, or just beyond it, when it appears as a broken thread. At other times the needle separates the filament from all its grooves, showing the spiral weaving, or it may appear as crossing from fibril to fibril in a ladder-like form. In the study of these spiral weavings, I have found it necessary to bear in mind that the fibrils are all semi-solid and glutinous, and liable to vary in appearance according to the tension or from variations in the original structure.



Voluntary muscle-fibre of crab, teased from alcohol. 1200 diameters.

The impression produced from many observations is that the intermediate spiral fibrils have a contractile function, while those they enclose are elastic. This view of the ultimate structure can be readily harmonized with the observations of others, while no other seems possible to account for the appearances in the specimens referred to. The oil granules between the fibrillæ in fatty degeneration confirm this view, since the more active fibrils will be the first to succumb.

Some of the early microscopists, as Muys and Gruby, referred to by Bowman in the "Cyclopedia of Anatomy and Physiology," considered the fibrillæ to be spiral threads, and Dr. Barry, in a paper read before the Royal Society, described the fibrils as flat filaments, or rather spiral threads placed side by side, with their coils interlacing. The transverse striæ he regarded as caused by the windings of spirals, within which minute bundles of longitudinal filaments are contained. Bowman argued against this view from the philosophical theory that it would involve the idea of spiral motion in universal nature. Such reasoning, however, as against positive demonstration, is quite unscientific, yet it may not be irrelevant to refer to other instances of spiral motion and structure, as the moon's motion in space, the spiral cells and vessels in plants, many spiral shells, and the spiral twist in certain ganglionic nerves in animals. The first manifestation of formative power in living protoplasm, or bioplasm, is the appearance of fibrils, generally in a reticulum, or network, and the nature of the reticulum corresponds to the special structure or function of the tissue, as illustrated in epithelium by its reticulation according to Klein, the reticulum in nerve cells of brain and cord, as described by Luys and others, the network in peripheral endings of the axis cylinder of nerves, and reticulation in all the connective tissues as described by Heitzman. The complex movement of fibrils is seen in neuclear division of cells, or karyokinesis, and spiral movement in some of the ganglionic fibres of the heart, as well as in muscle. It is easy to demonstrate the spiral plaiting of fibrils in suitable pieces of fresh muscle fibre taken from a crab's claw and put in absolute alcohol. In a day or two a specimen is placed in glycerine under a dissecting microscope and carefully teased with needles.

I have not found it practicable to demonstrate the spiral plaiting in every piece of muscular fibre examined. In some specimens the glutinous muscle substance has been so hardened by the reagent that teasing with needles could not unravel, nor even separate the fibrils. In such instances the fibres showed the striæ in the usual way, but softer and more flexible fibres are readily separated into fibrils which, when stretched with the needles, are more or less unravelled. A small piece of teased fibre may be stained and mounted in glycerine. The end portions of the specimen will probably exhibit unmarked longitudinal fibrils. Sometimes these show the grooved markings, producing a prismatic or bead-like structure. Where the needles have not been used, the transverse markings and short fibrils, like Bowman's sarcous elements, will be seen, but where the fibre has been torn, the spiral weaving will be manifest. It requires a great stretch of imagination to conceive such results to be the effect of the alcohol or of the teasing. The original structure of the muscle substance can only be responsible for the microscopic appearance,

Respecting the opinion expressed by Dr. Dallinger, that positive knowledge will require much better instruments than we possess, it may be said that quite moderate powers and apertures suffice to exhibit the appearances described, and that more perfect objectives of the largest numerical aperture, while giving brighter and better views, add nothing to the minutiæ of the structure. I have tested this with a fine $\frac{1}{20}$ homogeneous immersion objective of Gundlach, a superior $\frac{1}{8}$ homeogeneous immersion, of 1.43 N. A., by Bausch and Lomb, and with the celebrated $\frac{1}{10}$ apochromatic of 1.50 N. A., by Powell and Lealand.

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A RAPID METHOD OF LOCATING INTESTINAL WOUNDS BY THE USE OF HYDROGEN GAS AND AN ANTISEPTIC FLUID.

By D. D. CROWLEY, M. D., Oakland, Cal.

Read before the California Academy of Medicine.

Up to the present time it has been the custom of surgeons when called upon to treat penetrating wounds of the abdomen with accompanying symptoms of serious injury to the viscera to perform a laparotomy and inspect the important structures.

That part of the viscera which most often tries the patience of the operator in his search to determine the presence or absence of wounds, is the digestive tract, for usually a moderate-sized wound, one-fourth to one half inch in length, sufficient in magnitude to cause death, may elude the vigilance of the operator for one-half to three-quarters of an hour, or longer, and when found he is not certain that another may not be present.

The usual method in such an exploration has been to carefully pass the intestine through the fingers, beginning at the pyloric end of the stomach and ending at the sigmoid flexure. The stomach, too, is raised and depressed to ascertain if it be wounded. Valuable time is employed in such an examination—time that diminishes the chance for the recovery of the patient in proportion to its protraction, and it is certain that the excessive manipulation of the gut aids considerably in producing shock, and often death.

In this paper it is not my intention to consider the advisability of operative interference in penetrating wounds. I consider that certain symptoms which usually follow a dangerous wound will impress the observing surgeon as to the advisability of using the knife. I will therefore limit my remarks almost entirely to a method for quickly locating wounds in the intestines or stomach by the employment of hydrogen gas forced into the rectum, and a weak carbolized solution poured through the abdominal wound upon and covering the intestines. This I have already described (MEDICAL TIMES, vol. VI, p. 24), but I am now able to present the results of a much larger experience with it.

To elaborate slightly upon the subject, it may be understood it is the rule, when the abdomen is freely opened for exploration, that the intestines are prone to escape from the peritoneal cavity, or at least roll up above the surface of the wound, but this does not prevent a carbolized solution being poured into the peritoneal cavity until it is filled. Gas can be insufflated into the rectum until bowels and stomach are distended, if they are not wounded. If the intestine be wounded, the gas escapes in proportion to the size of the opening. When this is large, the intestine is only distended from anus to wound, the gas then passing into the peritoneal cavity. When the opening is small, the gas escapes in quantity sufficient for diagnostic purposes, but may pass the wound and inflate the entire digestive tract. When two or more wounds exist, the gas will, by preference, escape from that nearest the rectum. If the intestines are forced by the hand of the operator below the surface of the solution, the gas will appear as large white bubbles ascending through the fluid. These bubbles will direct him immediately to the point of escape from the intestine. The wound being sutured, the gas is again insufflated, and if bubbles no longer appear it is positive proof that the wound is properly sutured, and that no other intestinal lesion exists.

The antiseptic solution and hydrogen gas as a diagnostic medium, are, without question, certain and rapid in their office, shortening to a minimum the time used in exploration, and positively demonstrating the presence or absence of any penetrating wound of the intestinal tract. If, then, no harm follow their use, or if they do not act as a hindrance to returning the intestines to the cavity, to completing the peritoneal toilet, or with the apposition and repair of tissues, and in a general way retard the recovery of the patient, they should certainly be used when intestinal wounds are suspected.

To definitely determine these points, I used a number of dogs, upon which I could follow a line of investigation from the reception of the injury until the termination of the case—a line of investigation that is quite impossible on the human subject, owing to the limited number of such cases and the impossibility of gleaning aught but an imperfect history of any case unless death should ensue.

EXPERIMENT I.—Hound; bitch; weight 20 pounds. May 18, 1892. Anesthetized. Shaved abdomen, and prepared surface for operation by washing with carbolized solution and covering greater part of surface with warm, moist carbolized cloth, leaving bare, only, the linea alba for a distance of 5 or 6 inches. Made an incision in the median line through muscular tissue to peritoneum, also slit peritoneum sufficiently to introduce fingers, after which this membrane was torn until its wound equaled the external. The intestines now being exposed, an assistant was directed, while I was not observing him, to make one or more wounds through their walls, as distant from the surface as possible. I then proceeded to discover the wound or wounds by inserting the rectal tube which was connected with the hydrogen bag, and after slight pressure of the foot on the gas bag had been maintained for four or five minutes, the intestines and stomach became inflated. Warm, weak carbolized solution was poured into peritoneal cavity while intestines were becoming inflated. During the greater part ot this time the abdominal viscera were protected by warm, moist, antiseptic cloths, which were drawn aside when the solution was poured upon the intestines. By slight pressure of the hand the intestines were fairly submerged, and a spluttering or disturbance of the fluid ensued, which directed my attention to the left iliac region. Raised a couple of coils of intestine from that location, the gas escaping from the bowel through the fluid quickly guided me to a wound about ½ inch in length. This was sutured, and the loop returned, after which the external wound was covered with warm carbolized cloths, and the digestive tract again inflated. More fluid was poured into the peritoneal cavity; bubbling and spluttering followed; the intestine in its immediate vicinity was raised and a wound discovered, which was treated as the first. A third insufflation demonstrated a third wound, but the fourth insufflation only distended the intestines and stomach, and, as no gas escaped through the fluid while the intestines were submerged, the abdominal wound was sutured without further explorations. The sutures included all of the tissues. A few superficial sutures were also used to more accurately appose the integument. The wound was dressed antiseptically. From the time the animal was anesthetized until antiseptic dressings were applied, was about 60 minutes. It required 15 minutes to make 4 insufflations of gas, 6 minutes for the first and 3 minutes each for the 3 last. After the cecal valve has been once dilated by gas, it requires a much shorter time thereafter to distend the entire tract. The time required to locate wounds after intestines were inflated was 6 minutes, or about 2 minutes to each wound. The animal was not eviscerated, as only a few coils of intestine protruded from the abdominal wound, and these were protected by warm, moist, antiseptic applications. The intestines remained slightly unprotected during the six minutes of exploration, and to a much less degree while suturing the wounds. The warm carbolized water introduced from time to time into the cavity had a tendency to keep the intestines at a uniform temperature. Its diagnostic assistance is most marked. For while gas will produce a sound in its escape from a small aperture, it causes a marked disturbance in the water, which I designate as a bubbling or spluttering. There was but little difficulty in returning the intestines, and no decided hindrance to suturing the abdominal wound. In returning the intestines considerable gas was forced from them through mouth and rectum by the pressure of the hand.

May 19th—Owing to escape of gas from intestines during night, and the resulting diminution of the body, the dressings were only poorly in contact with wound. Removed draining tube and redressed wound. May 23d—Six days after operation removed dressings and sutures. The latter had cut through the tissues ¼ inch, and a few were only attached to one side of the wound. By moderate pressure of the hand, forced through stitch holes and small aperture from which drainage tube had been removed, a bloody fluid, which did not appear to be septic. Carefully redressed with oakum, absorbent cotton, and other protectives. Iodoform was thoroughly rubbed into wound. Temperature, 98°. Drank quite freely of milk. Could walk easily if it were not for bandages interfering with the movement of hind legs. May 30th—Redressed wound as usual. Dressings saturated with a purulent fluid. Sutural paths not entirely repaired. Abdominal incision united, except possibly at point where drainage tube had been. June 24th—Dog in good health, and heavier by several pounds than when operated upon. Killed with chloroform, and after several experiments carefully examined intestines. Of the three wounds that had been sutured, there was nothing to point out their location except a thickening of intestinal tissue, and at one place an angular position of the intestinal wall. No sutures could be found, and the lumen of the intestine, that at first must have been reduced one-third, had now attained its normal size. This proves that small wounds of the intestines are not always followed by a material diminution of the lumen. The passage of the intestinal contents acts on the walls during repair much the same as a sound upon the urethra in remedying a stricture. This dilatation of the intestines does not begin to take place until the second or third week. There were a few adhesions between the intestines and between the intestines and abdominal wall, but they were not extensive, and so far as I could judge would not interfere with the function of the bowel.

I have introduced the various steps in this experiment for the purpose of making the subject of the paper clearer. Many of these will not be touched upon in describing further experiments.

EXPERIMENT II—May 20, 1892—A small mongrel terrier bitch. Resisted anesthesia and died in a few minutes after its improper administration. As this did not necessarily interfere with the principal object of the experiment, that of locating intestinal wounds, the abdomen was shaved, and the usual steps were employed in exposing to a necessary extent the abdominal viscera. Made four incisions in the intestines, two upon the convex surfaces and two near the attachment of mesentery. Dr. Rogers, who has assisted in nearly all my experiments, at my request, carefully examined the intestines in order to locate the wounds, he being uninformed as to their number or location, and found the two on the convex surface, and sutured them. The time occupied was three-quarters of an hour. Upon further investigation he decided that no more wounds existed, but desired to use the gas to substantiate his decision. The hydrogen gas was at least ten minutes in passing the ileo-cecal valve, owing to some pathological obstruction. In 2 or 3 minutes a small wound was discovered near the valve, and after suturing it a second wound was located in 3 or 4 minutes. In locating the last two wounds, bubbles could be easily seen rising rapidly through the fluid. While making this investigation it was also ascertained that a sutured wound permitted gas to escape, and by holding it under the fluid the faulty point, though not larger than a pin's head, could be distinguished by the course of the bubble. In concluding this experiment, one of my associates made a wound for me to discover. I did so within two minutes, *i. e.*, found the intestine from which the gas issued; yet so obscure was the wound that it was necessary to again submerge it in order to discover the exact location, as it was made where the mesentery was attached to the intestine, the wound in the mesentery being the smallest that could be made by a small-bladed knife, while the deeper or intestinal wound was about one-half inch in length.

EXPERIMENT III.—May 24, 1892, 11 A. M. Small, yellow bitch. After the usual preliminary antiseptic precautions and anesthesia, stabbed the abdomen twice with a sharp pointed knife, in the umbilical region, each wound penetrating the peritoneal cavity. This was done for the purpose of endeavoring to wound the intestines. Opened the abdomen in the median line to the extent of five inches, and examined intestines for wounds; finding none, filled cavity with carbolized solution and injected gas, which at the end of eight minutes passed the ileocecal valve. This demonstrated that no wound was present. While abdomen was opened, assistant made a wound in intestine and returned it, and although less than ¼-inch in length, it was located in one or two minutes by the use of hydrogen gas and carbolized water. It was secured with three stitches. The peritoneal cavity was carefully sponged out and abdomen closed as in the first experiment. May 25, 1892—Removed dressings and drainage tube and redressed antiseptically. Dog inclined to lie down most of time. May 30th—Redressed wound after removing stitches. Abdominal wound fairly united, and suture paths very small. Small opening communicating with peritoneal cavity when drainage tube had been removed. Dog quite strong and able to walk about. June 3d—Died during night. Examined abdominal cavity and found a general peritonitis. Intestine undergoing dissolution, necrosis of tissue so extensive as to produce perforation of intestinal wall. The most extensive inflammation was in the vicinity of a tumorous mass composed of intestines, one loop closely adhered to another until a globular mass was formed. After pulling the coils apart, a large pledget of cotton was found within, which had been left in abdomen May 24th. When abdomen was first opened, the cotton was surrounded with a quantity of pus, but the pus and cotton was thoroughly separated from the cavity, excepting small apertures that had been recently formed, through which the peritoneal cavity was infected. The wound made in the intestine on May 24th was united, and the stitches fairly covered with firm lymph.

EXPERIMENT IV.—Large, yellow bitch. Anesthetized, and shot through abdomen with 32 calibre pistol. Wounds caused by bullet in skin, small; very little hemorrhage issuing from wounds. Opened abdomen, and without the assistance of gas could readily discover several wounds in the intestines. Three in the small intestine, and one completely severing the bowel; two in the mesentery, from one of which a sufficient hemorrhage took place to fill the abdominal cavity. One-half inch of the cecum was cut away, and a large and small wound were found in the sigmoid flexure. The spleen was also wounded. Working with all the rapidity possible, all of the wounds could not be sutured within two hours. The source of hemorrhage could not be ascertained without drawing many of the intestines from the cavity. The animal died before the operation was finished and before there was any necessity of using gas and water for diagnostic purposes. Cause of death was hemorrhage and shock. The anesthetic might also be claimed as an aid. In this instance the animal should have been immediately eviscerated and the bleeding vessels secured.

Experiment V.—June 24, 1892. After sacrificing black dog by anesthesia, an anterior incision was made communicating with viscera. The intestines were brought into view, and one was wounded sufficiently to introduce a finger, and then returned. Hydrogen gas was inflated *per rectum*. It passed the ileo-cecal valve in five minutes, and within another minute the small intestines were distended. These were submerged, and small bubbles of gas arose rapidly through the fluid, guiding the operator to the wound.

Experiment VI.—July 7, 1892. Small bitch, weight 15 to 25 pounds. Anesthetized, and stabbed abdomen in three different places. Opened cavity by a 3-inch median incision, and discovering a serious hemorrhage, gave immediate attention to it by drawing several coils of the intestine into abdominal wound. This permitted a ready examination of the mesentery, and a wound was quickly found at its union with the intestine. This included the serous and muscular coats of the intestines, -$\frac{1}{2}$- to -$\frac{2}{8}$ inches in length, a small slit in mesentery, and a divided artery. The wound was sufficiently approximated by the employment of three sutures in the intestine and two in the membrane, one of the latter acting as a ligature to the severed vessel. The diagnostic elements gave negative results. Wounded the intestine and proved the efficiency of gas and fluid. Sutured wound and closed abdomen. July 10th.—Removed dressing and drainage-tube. No sutures removed, though there was slight suppuration in sutural paths. Redressed with carbolized gauze, oakum, and absorbent cotton. Since the 8th the animal has been able to walk and has relished milk. July 22d.—Sacrificed dog and removed specimens. The cicatrices were thicker and less elastic than elsewhere. Two sutures were loosely protruding into the lumen of the gut. None could be seen on the serous surfaces.

In this instance it required manual manipulation of the intestines to reach the divided blood-vessel, and thereafter the use of gas and fluid to prove the presence or absence of wounds in the hollow viscera.

Experiment VII.—Dog. July 10, 1892. Anesthetized, and opened abdomen. Dr. Richardson wounded intestine. It required 5 minutes for the hydrogen gas to pass the ileo-cecal valve, after which the moist antiseptic towels were removed from the abdominal wound, and the intestinal wound sought for. This was discovered in 30 seconds. A second and third wound were made, and each was located within the space of a minute by the bubbles of gas. A very small wound was next made in the posterior surface of the stomach, the intestinal wounds being sutured, the gas quickly distended it and escaped from the mouth without demonstrating the presence of a wound. Upon raising the stomach from the adjacent posterior tissues, the gas quickly escaped and the viscus collapsed. Animal sacrificed and specimens removed.

Experiment VIII.—Bitch; July 20th. Anesthetized. Opened abdomen with usual precautions, and wounded intestine in three places, and stomach in two. It required 10 minutes for gas to pass the ileocecal valve. This was principally due to the large amount of fecal matter in colon. Within one minute after gas had entered small intestine, a wound was located, and after suturing, a second wound was discovered in about the same time. It required about two minutes to locate the wound on the anterior surface of the stomach, but the posterior wound, which was valvular, did not permit gas to escape. This, however, would not have required surgical interference, as the wound in the outer coat did not exceed $\frac{1}{4}$ inch, and that in the mucous surface $\frac{1}{8}$ inch in length, and a probe could not be passed through the wall of the viscus.

While gas and fluid may in any case be used without harm to the patient, where a wound of the intestine is suspected, I must admit that so far I have had no experience with them upon the human subject, but have used them entirely upon the lower animals, and from these experiments have made my deductions. Hydrogen gas as first proposed by Senn has been employed for several years in the diagnosis of intestinal wounds, but the conjoined use of fluid for this purpose is original, as far as I am concerned, in my experiments.

Several cases of penetrating abdominal wounds have come to my attention in the past two years. In none of these was laparotomy performed, and the patients recovered. In one of these, a patient received a large wound in the abdomen by the single thrust of a butcher knife, but had apparently recovered in 8 days, though a portion of the omentum had been cut away and 8 to 10 feet of the intestine was drawn through the wound for inspection. Gas and carbolized water were not used.

In 1890, I committed an error which has been mainly the cause of my special interest in intestinal surgery. The patient, a woman about 50 years of age, and exceedingly fleshy, was brought to hospital with a serious wound in the neck, severing the trachea and esophagus. There was also a wound in the abdominal parieties 6 inches in length, through skin and fascia, and only 3 inches in the peritoneum, having the appearance of a single thrust of a knife, as was subsequently proven at the inquest.

In this case I was assisted by two other physicians, and after carefully examining the intestines in the vicinity of the wound, none of which were found to be injured, the abdominal wound was closed. The patient died. At the inquest, a witness stated that she saw patient stab herself, then thrust her hand through the wound, draw forth a long coil of intestine, cut it off and throw it in the water closet. Though no credence was given the statement, I proved to myself that it was correct, by obtaining the coil of intestine and performing a *post-mortem* examination. In this instance hydrogen gas and an antiseptic fluid would have quickly demonstrated a wound in the intestine, and though the discovery would not have saved the patient, it would have saved the surgeon considerable mortification.

From a careful consideration of these experiments, and of others previously conducted, I have arrived at the following conclusions:

1. Large fecal accumulations materially hinder the insufflation of

hydrogen gas, usually increasing the time required to pass the ileo-cecal valve by 5 to 6 minutes.

2. Fecal accumulations also obstruct the point of the rectal tube, and may at times prevent the gas passing into the rectum.

3. Insufflation of hydrogen gas does not materially hinder the suturing of the abdominal wall, nor does it force the intestines from the abdomen during insufflation, as is often stated.

4. The carbolized solution employed answers two purposes, by removing blood and other extraneous matters, and by acting as an element through which the escape of gas from an intestinal wound becomes visible.

5. The use of gas alone reduces the time required in exploring the abdomen for intestinal wounds at least 75 per cent., but with the addition of an antiseptic solution the time can be reduced 90 per cent.

6. With gas and fluid no difficulty is experienced in ascertaining the presence of the smallest wound in the intestine.

7. A wound $\frac{1}{8}$ to 1 inch or more in length, in any part of stomach, may be located by these means.

8. A small wound, $\frac{1}{4}$ inch in length, on the posterior surface, or a small valvular puncture in any part of stomach, is not always readily located by the use of gas and fluid; but these two exceptions, as I have ascertained, usually do not require surgical interference.

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DEPARTMENTS.

OBSTETRICS, GYNECOLOGY AND PEDIATRICS.

By WALLACE A. BRIGGS, M. D., Sacramento, Cal., and

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The Decidua in Extrauterine Pregnancy.—DR. AYERS, in a paper upon this subject, summarizes as follows: (1) In extrauterine pregnancy the endometrium generally changes to decidua. (2) Decidual tissue is pathognomonic of pregnancy. (3) Portions of the endometrium may be obtained with the curette, examined with the microscope, and decidual tissue recognized if present. (4) Such tissue may be a remnant of an abortion, a part of a decidua surrounding a live ovum, or due to an extrauterine pregnancy. (5) The microscope, in connection with the clinical history, can determine to which variety the species belongs, and, if to the third, confirm the presence of an extrauterine gestation. —*American Journal of Obstetrics*, September, 1892.

Hydrastinin in Metrorrhagia.—F. GOTTSCHALK has successfully employed hydrochlorate of hydrastinin in the different kinds of metrorrhagia, sometimes in deep intramuscular injections (in the gluteal region), and sometimes by the mouth (maximum dose, gm. .05, three times a day). This quantity cannot be exceeded without disturbing digestion. It is manifest that hydrochlorate of hydrastinin acts only on the metrorrhagia itself, and not upon its cause. Furthermore, as it arrests the hemorrhage by virtue of its action upon the muscular walls of the vessels instead of upon the muscles of the uterus, ergot and warm water are preferable to it whenever it is necessary to lessen the atony of the uterine muscles. His experience leads him to conclude that hydrochlorate of hydrastinin is indicated: (1) In metrorrhagia, followed by uterine congestion (profuse menorrhagia in virgins, without concomitant lesions). (2) In metrorrhagia, following endometritis. (3) In profuse menorrhagia, after scraping of the uterine mucous membrane (it should be given a few days before, and during the continuance of, menstruation). (4) In metrorrhagia caused by retroflexion of the uterus. (5) In secondary metrorrhagia, that is, metrorrhagia dependent upon lesions of the annexes and their vicinity, salpingitis, ovaritis, ovarian tumor. (6) In metrorrhagia after the menopause. In all these cases, hydrastinin ordinarily produces good results, although it sometimes fails to do so without apparent reason.—*Nouveaux Remèdes*, August 8, 1892.

The Treatment of Burns in Children.—From the observation of a large number of cases, R. DEUME notes the important fact that burns of small extent are sometimes followed by grave complications, ending in death, while, at other times, burns covering two-thirds of the body give rise to no general phenomena, and result in complete recovery. Good results are often obtained by the use of freshly prepared iodoform or aristol gauze, bound on tightly with cotton, in order to obviate the necessity of frequent removal. If the granulations bleed too readily, or are too abundant, the dressings should be sprinkled with powdered salol or calcined alum. Sodium-sozoiodol, as a poultice or as an ointment, is less satisfactory. When recovery is slow and the granulations few, injections of sodium-cantharidate (gm. 025 every two or three days, not more than five in all), may prove beneficial.—*Journal de Médicine de Paris*, August 21, 1892.

Uncontrollable Vomiting of Pregnancy.—A case of this character is reported by DR. G. M. MURPHEY. Oxalate of cerium, creasote, hydrocyanic acid, bismuth, ingluvin, pepsin, cocaine, morphine, atropine, etc., all failed. Even dilatation of the cervix was of no avail, relief being obtained only after emptying the uterus.—*New York Medical Journal.*

Ovariotomy in Old Age.—DR. FANCOURT BARNES contributed to the British Gynecological Society the notes and specimen of a case of ovariotomy in a woman aged 72 years. The tumor was of two years' duration; recovery rapid. Mention was made of 22 cases of ovariotomy in patients over 72 years, tabulated by Mr. Bland Sutton.—*British Medical Journal.*

Curettage of the Uterus in the Treatment of Uterine Fibroma.—Gynecologists have long observed alterations of the uterine mucous membrane in fibromyoma of the uterus. Velpeau, Gallard and Courty remarked the frequent development of so-called fibrinous polyps upon the uterine membrane undergoing fibromatous degeneration. Gallard, Thomas, Demarquay, Hart and Barbour attributed hemorrhages, occurring during the evolution of fibroma, to alterations or modifications of the mucosa, and Hyder, von Campe and Hertzman called attention to the lesions of the endometrium. Hertzman described the fungous hemorrhagic endometritis of hypertrophic form encountered in cases of uterine fibroma, whence it follows that the hemorrhages, observed during the course of this affection, depend upon lesions of the endometrium. Schroeder, Martin, Walton and Doléris adhere to this theory. Winckel seems to have been the first to treat uterine fibroma by curettage, but Doléris, Coë and Walton have contributed to make this method known in metrorrhagia symptomatic of uterine fibroma, and the operation is often performed under these conditions. With what result? In the opinion of M. PECHEVIN, the hemorrhages are not definitively arrested, nor does the tumor cease to increase in volume, but the operation is valuable as a heroic remedy for the immediate arrest of hemorrhage which has resisted every other method of treatment. Abrasion of the uterine mucosa enables us to gain time, and it often happens that the patient may even reach the menopause without a recurrence of hemorrhage severe enough to necessitate surgical intervention. By repeating the curettage we may sometimes save the patient from castration or hysterectomy.—*Médicine Moderne.*

General Principles Relative to the Treatment of Endometritis and its Complications.—(1) Diseases of the uterine annexes, and of the uterus, and consequently their treatment, are identical in character. (2) In acute forms of pelvic peritonitis it is best to begin with conservative treatment, thoroughly antiseptic and antiphlogistic. (3) The one exception to this rule is that of acute peritonitis caused by the supposed rupture of a purulent sac. In these cases laparotomy cannot be performed too soon. (4) In subacute forms the same therapeutics (curettage, dilatation, disinfection, tamponning, resolvent injections, warm poultices, salicylates and iodides) effect, in most cases, a radical cure. (5) Surgical intervention is indicated when the disease persists and abscesses become localized and lose their power of resolution. Serious operations should be reserved for the chronic forms, but we should only resort to hysterectomy after unsuccessfully trying the less destructive methods—laparotomy, incision or puncture.—*Gazette de Gynècologie.*

SURGERY.

By T. W. HUNTINGTON, B. A., M. D., Surgeon Southern Pacific Company's Hospital, Sacramento, Cal.,

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Strangulated Hernia.—In an article on the management of strangulated hernia, DR. W. B. DEGARMO reaches the following conclusions: (1) The death rate from strangulated hernia is unnecessarily excessive. (2) Medicines and external applications are dangerous, in that their use often results in delay allowing destructive changes to take place. (3) The operation for strangulated hernia, if done early, is neither a difficult nor a dangerous one, and affords immediate relief from one of the most distressing and alarming accidents to which mankind is liable.—*Journal American Medical Association*, August 20, 1892.

The Effects of Sulphonal in Arresting Cramps of Fractured Limbs.—DR. EDWARD ANDREWS first employed this drug in a case of painful cramps from a recently fractured femur. Morphine relieved the patient as long as he could keep awake, but as soon as he became drowsy the cramps returned. On changing to sulphonal, in 15-grain doses, the spasms were completely arrested, both in the waking and sleeping condition. Repetition of the treatment in other cases of fracture always showed the same result. A gentleman in a railroad accident received a slight fracture of the spine, without any compression of the cord. He was harassed whenever he fell asleep by cramps of the intercostal muscles adjacent to the injured vertebræ. Sulphonal, in 15-grain doses, arrested the trouble completely. The drug is slow in its action, and where the cramps are only nocturnal it is necessary to give either a large dose two or three hours before the sleeping time, or else to keep up the effect by using moderate doses three times a day. It seems that the antispasmodic power of sulphonal is of more value than its sleep-producing influence, and that it will prove of immense value in many cases in which no one has yet thought of giving it a trial.—*Journal American Medical Association*, August 27, 1892.

Radical Cure of Femoral Hernia.—SALZER describes a new method of radical cure of large femoral herniæ. He objects to any attempt to bring together the margins of the ring by sutures, as the resistance of the fibrous structures would very probably cause local gangrene and sloughing. The plan of closing the canal by cicatricial tissue, either by removing its fatty and glandular contents, or by inserting foreign material, is also open to objection, as the new tissue thus produced is apt to become absorbed. His method consists in first removing the sac, and in the next place, in closing the external orifice by a flap formed by the fascia covering the pectineus muscle. This flap, the free convex margin of which is divided downwards, whilst its upper portion remains attached to the muscle, is turned upwards and fixed by sutures to the middle third of Poupart's ligament. In this way the septum crurale is replaced by a tough and resistant layer of fibrous tissue. The thickness of the pectineal fascia, it is stated, varies in different subjects, but the membrane is most likely to be found sufficiently resistent in old persons, and in those who have for a long time worn a truss for femoral hernia.—*British Medical Journal*, October 1, 1892.

Revolver Wound of Brain; Lodgement of Bullet; Recovery.—DR. P. BLAIKIE SMITH reports a case where a considerable part of the brain was traversed by a bullet, the patient making a complete recovery. Examination showed a small round aperture, slowly discharging blood and brain matter, situated over the right eye-brow immediately to the outside of the supra-orbital foramen and slightly above its level. A director inserted in the wound at once entered the cavity of the cranium through what appeared to be a small, clean punched opening in the frontal bone. It was slowly and carefully passed for its whole length into the brain, the distal end apparently occupying a situation not far from the upper extremity of the fissure of Rolando. No trace of the bullet could be discovered. No other serious wound existed. The pupils were equal and reacted normally. There was no paralysis of the ocular muscles. The patient was not unconscious and complained occasionally of headache. There was very slight paralysis of the left side of the face, chiefly in the vicinity of the mouth. He swallowed with difficulty. The left arm and leg were completely paralyzed, and at times presented jerking movements. The right side was unaffected. Sensation was no where involved. The pulse was slow, the respirations sighing and the temperature subnormal. Five days after injury the temperature was slightly elevated, but the patient was able to move the fingers of the paralyzed arm. From this time on, with the exception of one slight attack of meningitis, he continued to make favorable progress, and at the end of six months the only evidence of injury was the scar on his forehead. Nothing approaching an epileptiform seizure had ever been observed. The treatment consisted chiefly of rest, quiet, good nursing and suitable diet. The wound in the forehead was enlarged with the view of facilitating free drainage. During the attack of meningitis mercury was administered along with applications of ice to the head, with repeated doses of antipyrine to control pain. The bowels were constipated and there was reflex incontinence of urine. The secretion when tested was always normal. In the Medical and Surgical History of the War of the Rebellion, there are recorded nineteen cases of recovery from gun-shot wounds of the cranium, with lodgement of bullet in the brain. In four of these the bullet penetrated immediately above the right eye brow, traveling backwards and producing various symptoms, one developed epilepsy two years after the wound in the head had healed; the second had to be discharged from the service, owing to persistent headache and hallucinations; the third was pensioned four years after reception of the wound on account of vertigo upon exertion, while the fourth returned to his regiment after a stay in the hospital of almost two months. Out of the whole nineteen cases vertigo is mentioned as a sequela in seven instances and epilepsy is noted only twice, while headache, impaired vision, and various paralytic symptoms, such as paresis of limbs, deafness, etc., completed the remaining causes of disability.—*British Medical Journal*, September 17, 1892.

Modern Methods of Treating Compound Fractures.—The treatment of compound fractures, during the past few years, has undergone radical changes and marked improvement, which has been brought about by two causes: (1) Thorough exploration and cleansing of the wound and antisepsis. (2) By the recognition of the importance of the physiological principal of complete rest to a fractured bone. The results from older methods in Guy's Hospital in the twenty years from 1841 to 1861, was a mortality of 28 per cent.; in the New York Hospital during a similar period there was a mortality of 48 per cent.; in the Obuchow Hospital Report of St. Petersburg there was a mortality of 68 per cent. Under modern methods Dennis reports 681 cases of compound fractures with one death from sepsis, giving a death rate of one-seventh of one per cent. The important points to be observed are: (1) That every compound fracture of the thigh, leg, arm or forearm, should be rendered scrupulously surgically clean and should be absolutely immobilized. (2) That this immobilization is conveniently obtained by the light, circular, plaster-of-Paris washed bandage. (3) That a plaster-of-Paris bandage should not be allowed to remain on a limb over a fortnight in the first month of treatment of a compound fracture, as backward bowing and lateral displacement can be avoided by this precaution. (4) That while pus, slough, necrosis or deformity may exceptionally occur, yet the rule is, union by first intention, and the early restoration of limbs to usefulness.—HERBERT L. BURRELL, M. D., and EDWIN W. DWIGHT, M. D., in *Boston Medical and Surgical Journal*, September 8, 1892.

OPHTHALMOLOGY, OTOLOGY AND LARYNGOLOGY.

By WM. ELLERY BRIGGS, M. D., Sacramento, Cal.

Nasal Obstruction and Deformity, and their Removal by Conservative Surgical Methods.—The following rules are formulated by DR. C. C. RICE, to be observed in treating obstructions in the nasal cavity: (1) The only way to become skilful with instruments of examination, and expert in diagnosis, is to personally examine the upper respiratory tract of as many patients as possible. (2) Operations should be decided upon only after careful deliberation, and the relation in size between the obstruction and the total capacity of the nostril should be considered. When doubt exists as to the necessity of operating, try topical applications for a time. (3) Many cases of so-called "hypertrophic rhinitis" do not require application of destructive agents. (4) Remember that we do not find advanced hypertrophic changes in young people. (5) Deformities of the nasal septum are usually the first pathological condition to appear, and are the cause of later changes in the soft structures of the nose. The removal of this septal lesion should first claim the attention of the operator. (6) Do not produce large ulcerations on the septum by operative measures, when it can be avoided, as there may be some constitutional vice present that prevents rapid healing. Nothing is more efficacious in their treatment than the use of antiseptic washes and dressings. (7) "Traumatic" atrophic rhinitis may be produced by destroying too much of the nasal tissue. (8) When hypertrophic enlargements are present on both the anterior and posterior ends of the turbinated bones, reduce the anterior ones first, and the posterior ones will usually disappear without cauterization. (9) Use the galvano-cautery by inserting the pointed wire into the turbinated hypertrophy rather than by burning the mucous surface with the flat electrode. (10) Antiseptic precautions should be observed, both in regard to preparing the nose and instruments for the operation and also during healing. Without antiseptics the patient will be likely to suffer from sepsis.—*Post-Graduate*, August, 1892.

Physical Voice-Training at School.—DR. T. H. SANDIFORD presented a strong plea, at the last meeting of the British Medical Association, in favor of systematic voice culture in schools and colleges, with a view to the prevention of the prevalent throat troubles in public speakers and others. He points out the fact that clergymen are common sufferers from serious voice affections, which are generally due to faulty use of the vocal organs. Actors, as a rule, have to use their voices in public speaking, but from the fact that they are taught to employ their vocal organs in a more natural manner, they suffer less commonly than ministers, from loss of voice. It is very desirable, both for the speaker and the audience, that correct and natural methods of speaking be taught, especially in the high institutions of learning. In fact, the respiratory passages should receive special attention in childhood, to obviate falling into faulty methods of breathing and speaking, from diseased conditions of the nose or throat.—*Medical Press and Circular*, August 31, 1892.

DERMATOLOGY, SYPHILIS AND VENEREAL DISEASES.

By G. L. SIMMONS, JR., M. D., Sacramento, Cal.

Gonorrheal Rheumatism in Children.—BÉCLÈRC reports (*Révue mens. des Maladies de l'Enfance*) two cases of this very rare, but not unknown, affection in childhood—one in a little girl of 5½ years, the other in a female infant of 20 months The first child had been the victim of an attempted violation, and in the course of the resulting vulvo-vaginitis and blenorrhagic urethritis she developed an arthritis of the radio-carpal articulation, with a synovitis of the extensor tendons. In the case of the infant of 20 months, the ankle joint was involved during the course of a specific vulvo-vaginitis, contracted by accidental contamination from a blenorrhagic discharge from the mother. In the literature of the subject the author has found no cases like his own, except the two reported by Koplik, of New York, both in little girls aged 3½ and 5 years respectively. Deutschmann, however, has observed two new born infants who, at the age of three weeks, presented articular manifestations in the course of blenorrhagic ophthalmia. It therefore is evident that gonorrheal rheumatism may occur in childhood from one of three modes of infection: blenorrhagic ophthalmia, especially of the new born; specific vulvo-vaginitis consecutive to attempts at violation; or, finally, accidental contamination from the mother or nurse.—*American Journal of Medical Sciences*, September, 1892.

The Strepto-Bacillus of Soft Chancre.—UNNA has found (*Monatshefte f.*

***pract. Dermatologie*) in five consecutive cases of pure soft chancre, a small, very short strepto-bacillus, which grew in chain form.** Although inoculation was not employed, Unna demonstrates their pathogenetic importance, because they were found only in soft chancre tissue, and such strepto-bacilli have not been discovered in other inflamed tissues, especially in syphilis, herpes, or varicose tumors. This strepto-bacillus is identical with the bacillus of Ducrey, found in the secretion of soft chancre.—*New Yorker med. Monatsschrift.*

Abortive Treatment of Buboes, after the Method of Welander.—Last year DR. WELANDER, of St. Geron Hospital, at Stockholm, reported an abortive treatment of buboes, by which he obtained 91 per cent. of recoveries where the treatment was instituted before suppuration had commenced. The method consists in the injection of a Pravaz syringeful of a 1 per cent. solution of benzoate of mercury into the base of the tumor and applying compression by a bandage. One injection has sufficed in the majority of cases to abort pus formation. DR. LETNIK, of the venereal department of the City Hospital of Odessa, has tried this treatment in 140 cases. In 122 cases, or 87 per cent., he obtained complete resolution. In the remaining 18 he had to incise, but they were all cases in which pus had formed before using the injection.—*Annals d'Orthopédie*, August 1, 1892.

MATERIA MEDICA AND THERAPEUTICS.

By WM. WATT KERR, M. A., M. B., C. M., Professor of Clinical Medicine, University of California, San Francisco.

Lysol.—CADÉAC and GUINARD have made a series of experiments with lysol, from which they conclude: Lysol is superior as a microbicide to carbolic acid, creolin, cresyl, and other analogous products; it has not, however, any advantage over the antiseptics of established reputation. It is only efficacious when used in solutions, which may be caustic and irritating. Although not destined to play a great part in surgery, it may often be useful in prophylaxis and arrest of epidemics and epizootics. It is likely to be particularly serviceable in the disinfection of premises, privies, railway carriages, ships, wharves, stables and cow houses. It is readily soluble, sufficiently active, and very cheap.—*British Medical Journal*, June 18, 1892.

Injection of Brown-Sequard's Fluid in Tabes.—At a meeting of the Societé de Biologie, DEPOUX showed a fencing master as an example of the cure of locomotor ataxy by hypodermic injections of testicle juice. The cure in this case had persisted for more than a year, and the muscular energy, precision, and strength of the movements, as also the power of resisting fatigue, were most remarkable. He also exhibited the adjutant of a cavalry regiment, who had suffered from tabes since 1890, and who had been completely cured in five months by the same treatment. At the date of report his condition was quite normal, except that the patellar reflex was still absent; but the patient could ride and perform his military duties as well as before his illness. M. Brown-Sequard stated that Dr. Gibert, of Havre, had also cured a case of locomotor ataxy in the same way, and Dr. Drospenski, of St. Petersburg, had informed him that of 36 cases of the same disease, the injections had effected a cure or marked improvement in 29. He also referred to the injection of testicle juice as a means of conferring immunity. Guinea pigs, rabbits, and other animals treated in this way afterwards proved refractory to inoculation of cultures of the microbes of anthrax, glanders, and tuberculosis, while animals inoculated at the same time died.—*British Medical Journal*, June, 1892.

MEDICINE AND PATHOLOGY.

By ALBERT ABRAMS, M. D., Demonstrator of Pathology, and Adjunct to the Chair of Clinical Medicine, Cooper Medical College, San Francisco, Cal.

Antiphlogosis.—A very interesting and perhaps practical fact is enunciated by PROF. S. SAMUEL (*Virchow's Archiv.*) It is well known that the application of croton oil to the ear of a rabbit, will, after a short time, produce severe inflammation of the crotonized ear. This inflammation can, however, be prevented when the other ear, or an extremity of the animal, is immersed in cold water. Samuel protracted this experiment for 12 hours, at which time no inflammation developed in the crotonized ear. He believes that the absence of inflammation might be retarded by longer immersion. That direct application of cold to a crotonized ear will delay and diminish inflammatory phenomena is well known, but that this should occur upon application of cold to the other ear is a puzzle, for which he cannot offer a satisfactory explanation. The practical application of this interesting pathological experiment will be in the treatment of inflammations by immersion of the extremity at a point remote from the inflammation.—*Münchener med. Wochenschrift*, April 19, 1892.

[The application of cold to the superficies of the body induces, through the automatism of reflex action, contraction of the arterioles, which contraction is more manifest in parts subject to phlogotic irritation. Inasmuch as dilatation of the blood vessels is an essential phenomenon in inflammations, the inhibition must necessarily retard the phenomena of inflammation.—A. A.]

On the Present State of Treatment of Chronic Diseases of the Spinal Cord. DR. L. WEBER recently read a paper upon this subject before the New York Neurological Society. The first aim before making a prognosis in any case of chronic affection of the cord, is to distinguish between functional and organic disease. In the treatment of structural diseases of the cord, tabes in particular, there are three methods of procedure. Dr. Weber is of the opinion that a case of tabes with a syphilitic history demands anti-syphilitic treatment, and furthermore, the results were better where the interval had been short between the infection and the appearance of spinal symptoms. In all such cases hydrotherapy and electrotherapy should be combined with the specific remedies. For the control of pain, antipyrin and acetanilid are given in combination. He believes that numerous observers have been losing faith in electricity as a therapeutic agent. He does not abandon its use because it seemed to have a tonic effect on the patients. The third method of treatment was by hydrotherapy. The sulphur bath is useful in connection with anti-syphilitic treatment. The treatment of spinal neuresthenia (spinal irritation) as observed in young people, in consequence of sexual aberration, is accomplished by changing the mode of life, mild tonics combined with bromides, the use of the steel sound in prostatic irritation, a three weeks' course of mild galvanism to the spine. The cold sponge bath and other suitable hydrostatic procedure would generally be sufficient to effect a cure. When it was practicable, a sojourn in the country and the use of cold baths of short duration was often advisable.—*New York Medical Journal*, June 4, 1892.

The Treatment of Biliary Colic.—M. FERRAND recommends glycerine as a most efficient cholagogue, and as a remedy in combating hepatic colic. Administered in large doses (from 20 to 30 grammes), it will speedily terminate an attack, while in doses of from 5 to 15 grammes, given daily in some alkaline water, it will prevent attacks of hepatic colic.—*Union Médicale*, March 10, 1892.

MENTAL DISEASES AND MEDICAL JURISPRUDENCE.

By A. W. HOISHOLT, M. D., Assistant Physician, State Asylum for Insane, Stockton, Cal.

Phosphorous Poisoning.—ELKINS and MIDDLEMASS report a case of poisoning from sucking the phosphorous ends of two boxes of matches, terminating in death after about 100 hours. The patient was a lady aged 34, who suffered from mental depression, but was otherwise intelligent, coherent in language, and had a good memory. Mental symptoms developed successively as follows: listlessness, drowsiness, restlessness, mental confusion, inability to understand and to answer questions and to recognize friends; semi-consciousness, semi-delirium, delirium, fits of great restlessness and violence, constant use of the word "yellow" when delirious, maniacal expression and behavior, coma. Of sensory symptoms, rheumatic pains and blindness were present; of motor symptoms, thick and drunkenlike speech, fixed and dilated pupils, external strabismus of left eye. The *post-mortem* examination showed fatty particles in the walls of the larger capillaries and fatty granules in the larger nerve-cells of the cortex of the brain, the change in the nerve-cells being most pronounced in the fourth layer. The late teaching that phosphorous does not cause fatty degeneration in the nerve-cells is contradicted by the results of the pathological investigation in this case. The extensive fatty degeneration in many tissues of the body must be due to some fundamental alteration in the processes of metabolism brought about by phosphorous, but the nature of this alteration is not known.—*British Medical Journal.*

Caution in Dispensing Poisons.—The value to a druggist of extreme care in dispensing poisonous substances was forcibly brought out in the recent Harris trial in New York. The apothecary was able to show that the assistant, who prepared the medicine, took from the closet morphine contained in a black bottle labeled poison; that he weighed out the directed quantity of the drug, and that this operation was witnessed by another assistant. The second assistant testified that he had seen the proper weight in one pan of the scale and just enough morphine in the other to balance it, and that he then noted his observation in a book kept for the purpose.—*Boston Medical and Surgical Journal.*

An Unjust Award in a Malpractice Suit.—A jury in Poughkeepsie has recently rendered a verdict of $2,500 against a physician of that city for alleged malpractice in the case of a man who fell upon a sidewalk of dirt and ashes and sustained a compound comminuted fracture of the arm. A month after the accident he was admitted into St. Luke's Hospital, New York, for septic infection; the arm was incised to facilitate the escape of pus, and it has been useless since he recovered. He based his suit on the ground that the attending physician at his home did not properly cleanse the wound. The award on this ground seems very unjust, as the most skilful surgeon might, under the circumstances, have had a similar result.—*New York Medical Journal*, March 26, 1892.

Liability of Almshouse Physicians.—MR. H. A. RILEY reports a case from the New York courts which decides the point that a physician employed by a city to treat patients at the city almshouse is liable to a patient injured through the physician's negligence, although there was no contract relation between the physician and the patient. It has also been held that the fact that a physician or surgeon renders services gratuitously does not effect his duty to exercise reasonable or ordinary care, skill, and diligence.—*Northwestern Lancet.*

FORMULÆ.

By Geo. B. Somers, M. D., San Francisco, Cal.

Chronic Blenorrhea.—*Le Monde Pharmaceutique* advises the following:

Silver nitrate crystals----gr. viii
Lanolin, anhydrous ----- ʒ ix
Olive oil---------------- ℥ ss—M

Dissolve the silver nitrate in a very small quantity of distilled water, and incorporate the solution with the lanolin, then incorporate the olive oil.

S.—Smear on a grooved sound and introduce into the urethra 2 or 3 times a week.—*National Druggist.*

Hypertrichosis.—Dr. Nichols calls attention to the following modification of a German formula, which is useful for removing hairs that are not very coarse or deep rooted.

Barii sulphydra---------- ʒ ii
Zinci oxidi
Amyli pulveris--------āā ʒ iii

To be applied in the form of a thin paste, and removed as soon as dry.—*Boston Medical and Surgical Journal.*

Injections for Thread-worm:

(1) Warm water------------ ℥ iv
Perchloride of iron-----gtt x

S.—For one injection—morning and evening.

(2) Bitter quassia----------- ℈ ii
Distilled water---------- ℥ iv

Macerate 24 hours and filter.

S.—For one injection.

(3) Codliver oil ----------- ℥ i
Yolk of egg ----- -----No. i
Water----------------- ℥ iv

Make an emulsion.

S.—For one injection.—*Union Médicale.*

The Care of the Hair.—In the *Medical Bulletin*, Dr. J. V. Shoemaker gives the following prescriptions, which have been tried many times and found to be especially useful:

(1) *For baldness.*

Resorcin --------------- ℥ ss
Glycerin
Spr. myrciæ------- ---āā ℥ iv

(2) *For dandruff.*

Tr. cinchon. co.---------- ℥ i
Tr. benz. co.. ----------- ℥ ii
Glycerine --------------- ℥ i
Spr. odorat
Aquæ ----------------āā ℥ ii

(3) *For general thinning and loss of hair.*

Hydrarg. chlor. corros.--gr. xv
Glycerini---------------- ℥ ii
Sp. myrciæ-------------- ℥ iv
Ol. geranii---- ----------m xvi
Aquam ---------------*ad* Oss

(4) *For loss of hair.*

Acid boric--------------- ℥ ss
Hydrarg. chlor. corros.--gr. xx
Glycerini
Aq.------------------āā ℥ iv

Brandreth's Pills.—Dr. D. S. Clark (*American Druggist*) says the formula is as follows:

Extract colocynth-------- ℈ i
Aloes socotrine---------- ʒ ii
Gamboge ---------------- ʒ i
Castile soap------------- ʒ ss
Oil peppermint ---------gtt ii
Oil cinnamon ----------gtt i
Powdered gum arabic
Alcohol---------------āā qs—M.

Make 80 pills. Dose: One to three as directed.—*Medical and Surgical Reporter.*

PUBLIC HEALTH.

By W. R. Cluness, M.A., M.D., Sacramento, Cal.

Mortality for September.—The deaths registered in 119 town districts of the State during the month of September, in a population of 847,500, correspond to an annual rate of 13.92 a thousand, the total mortality having been 973. 171 deaths were due to zymotic diseases, giving an annual rate of 2.41 a thousand. Of these, 31 were due to diphtheria, 38 to cholera infantum, 24 to typhoid fever, 20 to diarrhea and dysentery, 9 to cerebro-spinal fever, 20 to scarlet fever, 9 to whooping cough, 10 to croup, and 9 to remittent and intermittent fevers. 203 deaths were due to diseases of the respiratory organs, giving an annual rate of 3.01 a thousand. Of these, 132 were due to consumption, 39 to pneumonia, 23 to bronchitis and 9 to pulmonary congestion, the rate being for consumption and pneumonia, 1.86 and .55, respectively. 72 deaths resulted from diseases of the heart. The average annual death rate from all causes, occurring in the ten largest cities and towns in the State, and representing a population of 565,000, was 14.35 a thousand. The highest rate for the month occurring in cities having a population of 10,000 or more inhabitants, was reported from San Francisco, the lowest from San Diego.

The Progress of Cholera.—September 27th—No new cases of cholera having appeared in New York since the 19th ult., it is confidently asserted the disease has been stamped out. Hamburg, 70 cases, 35 deaths; St. Petersburg, 20 new cases and 2 deaths. Fewer cases, and of less virulence, in the provinces. September 28—St. Petersburg, 18 new cases and 3 deaths. Decreasing everywhere on the continent. Cherburg, which has been the point of arrival from and departure for New York of the general trans-Atlantic steamers since Havre became infected, reports 3 cases of cholerine. September 29th—Hamburg, 44 new cases and 16 deaths; Havre, 4 cases and 2 deaths; Paris, 36 cases and 18 deaths; St. Petersburg, 35 cases and 7 deaths. September 30th—Hamburg, 33 cases and 4 deaths; Havre, 6 deaths; St. Petersburg, 20 new cases and 13 deaths. Buda Pesth, Hungary: It is reported that cholera has broken out in a Servian village across the Danube, and that several deaths have occurred. October 1st—New York: On account of the entire absence of cholera, it is announced that the issuance of bulletins has ceased. Hamburg, 47 new cases and 14 deaths. Portel, a suburb of Bologne, France, reports 100 cases during the past 10 days. Russia: Cholera is officially announced at Tiraspol, Bender, Kilschineff, and Nicholijeff, near Odessa, and the government has ordered all fairs closed for one month in the south. Large barracks are being constructed for patients, and all trains have invalid carriages attached. October 2d—Hamburg, 43 new cases and 21 deaths; Paris, 35 cases and 10 deaths; Buda Pesth, 21 new cases and 6 deaths; St. Petersburg, a decrease in the number of cases and of deaths. October 3d—Russia: Cholera still rages in Saratov, on the Volga; Tamboo, on one of the middle branches of the Don, and at Pultova, on the Voskla, one of the eastern branches of the Dnieper. In Saratov, 400 new cases and 300 deaths are said to occur daily; in Tamboo, 200 new cases and 50 deaths, besides an average of 100 new cases and 60 deaths daily in the vicinity; in the Caucasus, also, several hundred deaths are of daily occurrence. Hamburg, 26 new cases and 12 deaths; Buda Pesth, 21 new cases and 6 deaths. October 4th—Hamburg, 24 new cases and 11 deaths. Official figures give the number of deaths from cholera to date at 7,536, and the number of cases since the commencement of the epidemic, 17,701. Vienna: Much apprehension is felt lest the plague secure a foothold. Count von Taffee says: "It is impossible to close Vienna against the pest, so the malady is expected here any moment." The epidemic is spreading throughout Galicia.

The Prospect of a Recrudescence, and the Precautions to be Observed.—The suddenness with which the press ceased to chronicle the progress of cholera in Europe at this period in its history, has induced the belief in many quarters that the scourge wholly disappeared simultaneously with the publication of news regarding it. It is nevertheless a fact that, although the force of the epidemic had then become expended, yet large numbers of cases and deaths have been daily occurring ever since, and sudden outbreaks in several of the provinces of Southern Russsia, Austro-Hungary, and Hamburg and vicinity, are by no means infrequent. At Saratov, on the Volga, and in several of the provinces south and east of Moscow, many cases are taking place daily. The epidemic, however, is now practically over for the season. If we accept the history of previous epidemics, and the views of Professors Koch, Virchow, Pettinkoffer, and other scientific observers, as our standard of judging its future course, the germs of the disease have been merely rendered dormant by climatic influences. Another outbreak may therefore be expected to occur (perhaps in some remote and unexpected locality) simultaneously with the return of summer. It must be recollected that frost, however severe, does not kill the germ, but merely renders it temporarily inactive; and that, consequently, however dormant it may b[illegible]ring winter, heat, moisture, and a suitable soil for its propagation are sur[illegible]restore it to active life. Should the disease recur during the coming summe[illegible]will find us better prepared to resist its encroachments than at any time in [illegible] history of civilization. We now know the cause, method of propagation, and measures to be adopted to prevent its spread. We know that an infinitessimally small microörganism, which is susceptible of very rapid multiplication, is the factor that induces it, and that these germs must be swallowed, and must reach the bowels before they can produce their specific effects. Healthy stomachs of acid reaction will usually digest them, and *per contra*, over-taxed and diseased stomachs of alkaline reaction form breeding places for them. The germs thrive in water, especially when it is contaminated, in foul privies and cesspools, in damp, ill-ventilated houses and cellars, in badly-drained sewers and imperfectly constructed sinks; in short, wherever filth accumulates and unsanitary conditions of person or premises exist. To prevent cholera we should, therefore, observe personal cleanliness and the rigid enforcement of hygienic laws in our dwellings, and all their necessary attachments and environments, both within and without. These are the means to be adopted to prevent the cholera, for these are the enemies of the germ which causes the pestilential exotic.

METEOROLOGY.

Summary for September.—*Temperature.*—The normal temperature in the State for September is 68°, and the mean or average temperature for September, 1892, is 68°. There is, therefore, no departure from the normal. The month has been one of good conditions. The most unusual meteorological features being the thunder and lightning storms of the 24th, 25th, 26th, 28th, 29th, and 30th in various portions of the State, from Mount Shasta Springs on the north to Pasadena on the south. The highest monthly mean temperature was 87.4°, at Needles, and the lowest, 61.1°, at Santa Cruz. Maximum temperature, 108°, at Needles; minimum, 33°, at Pleasanton. Greatest monthly range, 60°, at San Ardo; least, 28°, at Berkeley.

Rainfall.—The normal precipitation in the State for September is .18 of an inch. The average for September, 1892, is .22 of an inch, showing a departure from the normal of +.04 of an inch. The greatest monthly precipitation was 2.26 inches, at Crescent City, while there was none at various places. A light frost was observed at San Jose on the 5th and 23d, at Upper Mattole on the 3d, and at Arcata on the 30th; all too light to do any damage.

California—Tabular Statement for September, 1892.

STATIONS.	TEMPERATURE.						RAINFALL.		Mean Relative Humidity	WEATHER.			WIND.	FURNISHED BY—
	Mean	Highest	Lowest	Mean Highest	Mean Lowest	Mean Daily Range	No of Days Rain Fell	Total Rainfall		No. of Clear Days	No. of Fair Days	No. of Cloudy Days	Prevailing Direction.	
Auburn..........Cal.	70 6	94.0	57.0	------	------	------	----	0.15	------	----	----	----	S.	Southern Pacific Company.
Berkeley......... "	61 5	79.0	51.0	67.7	55 1	12.6	3	0.07	86.0	7	15	8	W.	Obs. University of California.
Colfax........... "	65.6	98 0	45.0	------	------	------	----	0.00	------	----	----	----	S.W.	Southern Pacific Company.
Eureka.......... "	56.1	68.0	43.0	61.0	51.3	9.7	5	0.99	95.0	2	16	12	N.	Weather Bureau Dept. Agr.
Fresno.......... "	73.6	104.0	52.0	90.0	57.1	32.9	1	T.	44.0	28	2	0	N.W.	" " "
Keeler.......... "	75.7	96.0	55.0	87.4	64.0	23.4	1	T.	28.0	25	5	0	S.W.	" " "
Los Angeles.... "	67.8	95.0	50.0	80.1	55.4	24.7	0	0.00	79 0	20	10	0	W.	" " "
Monterey....... "	60.0	78 0	50.0	------	------	------	----	1.25	------	----	----	----	S.	Southern Pacific Company.
Napa............ "	62.8	88.0	46 0	75.4	53.4	22.0	4	T.	73 0	12	17	1	S.	Station Napa Insane Asylum.
Oakland......... "	59.7	83 0	49.0	72.0	53 9	18.1	3	0.04	87.0	19	8	3	W.	Chabot Observatory.
Paso Robles.... "	65.3	96.0	50.0	------	------	------	----	0.00	------	----	----	----	S.	Southern Pacific Company.
Red Bluff....... "	72.0	103.0	53.0	85.9	58.1	27.8	2	0.29	50.0	24	5	1	S. E.	Weather Bureau Dept. Agr.
Sacramento. ... "	68.8	96.0	48 0	83.3	54.2	29 1	2	0.18	67.0	26	3	1	S.	" " "
San Bernardino "	70 5	95.0	44 0	87.5	53.5	34.0	0	0.00	54.0	28	2	0	W.	A. K. Johnson, M. D
San Diego....... "	65.4	80.0	54.0	71.7	59 1	12.6	1	T.	81 0	20	8	2	N.W.	Weather Bureau Dept. Agr.
San Francisco.. "	60.2	88.0	51 0	66.2	54.2	12 0	1	0.02	89.0	11	16	3	W.	" " "
Santa Barbara.. "	64.2	86.0	50.0	73.3	55.0	18.3	0	0.00	78.0	22	6	2	E.	Hugh D. Vail.
Santa Cruz...... "	60.7	85.0	48.0	------	------	------	----	0.35	------	----	----	[illegible]	S.W.	W. R. Springer.
Yuma..........A. T.	87.2	111 0	65.0	103.6	70.7	32.9	1	0.04	------	25	[illegible]	[illegible]	W.	Weather Bureau Dept. Agr.

Blank (----) indicates data missing.

Occidental Medical Times.

COMMUNICATIONS are invited from all parts of the world. When necessary to elucidate the text, illustrations will be furnished without cost to the author.

SACRAMENTO: NOVEMBER, 1892.

CALIFORNIA NORTHERN DISTRICT MEDICAL SOCIETY.

The second annual meeting of the California Northern District Medical Society, the proceedings of which will be found in another column, was in every way an unqualified success. The meeting was held in the beautiful and prosperous town of Chico, at which place the Society was first organized. Originally intended to embrace only the adjoining counties its scope was extended so as to include the northern and central counties of the State. In this area are several local societies, and there is no reason why a large and prosperous association, meeting semi-annually, should not occupy this field. Medical societies of an active working type are essential to professional progress. Medical organization alone can bind the profession into a harmonious whole for its betterment and for its defence. The district society occupies a position intermediate between the local and State organization, supplying the place of the former where physicians are few and scattered. The Northern District Medical Society has started well and, we feel certain, will in a few years accomplish more than the most sanguine expectations of its founders. The next meeting will be held at Biggs, and no doubt in the near future the Society will convene at Sacramento, the cradle of medical organization in California.

THE WARD-MITCHELL MURDER CASE.

The case of Alice Mitchell, who killed Freda Ward at Memphis, Tennessee, last January, has attracted much attention throughout the country, especially in the medical profession, as the circumstances of the killing were very uncommon, and of a character making the sanity of the perpetrator of the crime questionable. A complete medical history of the trial has appeared in the *Memphis Medical Monthly*.

Alice Mitchell, a girl about 20 years of age, had formed an extraordinary attachment for another girl, Freda Ward, of her own age. The girls had been intimate for several years, but in course of time it would seem that the fondness of Alice Mitchell for Freda Ward had the character of love such as exists between persons of opposite sexes. The

Ward family became cognizant of the sentiments existing between the girls, and insisted upon a separation. On a subsequent occasion Alice Mitchell, actuated by jealousy, made an unsuccessful attempt to poison the object of her affections. Later, when she had determined to kill Freda Ward, she was on several occasions frustrated by circumstances, but finally succeeded, on a public thoroughfare in Memphis, in cutting the victim's throat from ear to ear with a razor. There was a great deal of medical expert testimony on both sides, but on the case being given to the jury without argument, a verdict of present insanity was agreed upon in a few moments.

That the slaying of Freda Ward was done by a person of unsound mind, there can be no doubt. The hereditary disposition to insanity in the family of Alice Mitchell is an unusually marked one. Had the mother of the girl had but one attack of puerperal insanity and her family been free from neuropathic taint, it might properly have been claimed by the prosecution that the mother's insanity was altogether accidental, but the cases of the brother and cousins, taken in connection with the repeated attacks of the mother, one of which required asylum treatment for three months, must be considered proof sufficient of an insane temperament.

The personal history of Alice Mitchell also gives evidence of inherited neuropathy. Her nervousness and excitability when a child, which at puberty showed itself as visible tremor and attacks of extreme nervous excitement; her abnormal masculine instincts, and her inability to receive mental education and cultivation are indicative of this inherited tendency. The history of her unnatural passion prior to the killing is characteristic of an existing mental disease as well as of a feeble intellect. Her perverted love absorbs all her energy; she becomes morbidly jealous, and attempts to kill the object of her love and herself with poison, but fails, and almost the next instant acts toward Miss Ward as if nothing had happened. She proposes marriage and arranges for elopement, laboring under the delusion that a legal marriage to a person of her own sex is possible, and without for a moment considering how she is to make a living for both of them, at the same time theatening to kill Freda Ward if she breaks her promise.

Her scheme being thwarted she becomes despondent, absent-minded and singular in behavior for a while, then, fearing that she will lose Freda, she commences to plan "to prevent her from marring any one by killing her, though she is still as much in love with her as ever. She wants her for herself." This displays an elevation of the *ego* characteristic of the paranoiac. Her mind becomes centered on the homicidal idea; she makes preparations to carry it out, and commits the crime, being at the time perfectly calm, but insensible to everything going on around her not concerned in the carrying out of the plan, which is "to prevent others from possessing what is hers." She is confused and excited after the deed and apparently unconscious of what she is doing; but this state of mind does not last long, she soon becomes quiet and indifferent, not realizing that she has committed a crime, nor regretting what she has done. When conversed with about the crime, before and during the trial, she made frank admissions, not hiding any of her thoughts and feelings, but telling them in an artless, child-like way. Her manners and answers showed plainly that her love for Miss Ward was not an ordinary sexual perversion. Still, her fondness for the sports and company of boys when a child, and her disinclination to, and almost abhorrence of, the society of young men when she had arrived at womanhood, coupled with the intensity and nature of the love which she developed for one of her own sex, are indicative of a congenital mental defect, which, if it had existed in an individual possessed of a higher intellect but belonging to a lower class of society, would undoubtedly have led to the development of a true sexual perversion.

The circumstances of the homicidal act of Alice Mitchell are peculiar and different from what is ordinarily observed in the paranoiac, but are readily accounted for by the presence of an enfeebled intellect which almost amounts to a mild degree of imbecility. That she should be committed to an insane asylum, being considered of unsound mind, is perfectly proper, but it would seem just that individuals who have been proved to be subject to such dangerous forms of insanity, of an incurable nature, should not be simply committed, but committed for life-time or at least for a prolonged period of years.

NOTES.

Dr. F. C. Durant.

Dr. F. C. Durant, of Folsom, died of apoplexy October 15, 1892, being that day 44 years old. He was visiting a patient at some distance from town and had finished his examination. On attempting to arise from his chair it was seen he was unable to do so, and after several unsuccessful efforts, he sank into his seat saying, "paralysis." He only survived the attack a few hours.

A Four-Years' Course for Cooper Medical College.

It is with much gratification that we are able to announce, authoritatively, that Cooper Medical College has decided to adopt a four-years' course as essential for graduation. The details of the new course of study will soon be made public, and medical education will have taken another step forward on this coast. The standard of professional attainments is much higher in California than in many of the older States. It is, however, desirable that the standard be maintained and even advanced as progress demands. Higher medical education means better physicians, and, with prolonged training, broader culture and increased attainments, will, as a rule, be found, a higher sense of the responsibilities of our profession, and of our relations to the public and to each other.

Changes at the San Francisco City and County Hospital and Almshouse.

At a special meeting of the San Francisco Board of Health, held October 1, 1892, the resignation of Dr. J. P. Lefevre as superintendent of the City and County Hospital was received and accepted. Dr. F. H. Titus, formerly resident physician at St. Luke's Hospital, was elected to fill the vacancy. Dr. R. E. Bunker, resident physician of the Almshouse, was succeeded by Dr. E. L. Parramore. Dr. Lefevre's reasons for resigning were based on a recent resolution of the Board of Health that required the superintendent of the City and County Hospital and the resident physician of the Almshouse to devote all their time to their respective institutions and not to attend to private practice. This regulation chiefly concerns the City and County Hospital. What influence it will have on the future welfare of that institution remains to be seen. On the whole it ought to be beneficial. As the salary is only two hundred dollars a month, and the position temporary, well-known physicians with paying practices will be deterred from seeking or accepting it. This may, however, be a distinct gain, for it is questionable whether physicians with an established practice can do justice to the management of a large hospital. With the present restrictions, the position will be more likely to fall into the hands of younger men, who are ambitious, and willing to devote their entire time and energies to the welfare of the institution and the establishment of their own reputations.

The San Francisco Polyclinic.

The annual report of the San Francisco Polyclinic for the year ending March 16, 1892, shows that institution to be in a vigorous condition. It was founded primarily as a dispensary for treatment of the sick poor, but recently, at the suggestion of the Regents of the University of California, a course of post-graduate instruction was organized and the Polyclinic, by mutual consent, became the Post-graduate Department of the University of California. The list of the faculty and assistants includes 48 physicians and surgeons. The number of cases treated during the year was 4,869, and these made a total of 20,881 visits. During a year and a half there were five matriculants. The Treasurer's report shows that from subscriptions, donations and other sources $13,310.67 was received. The principal item of expense was a payment on the purchase of a lot, $8,892.25. Through the efforts of Drs. Regensburger, Shiels and Morse, the Polyclinic is able to report an assignment to it of two wards at the City and County Hospital. These wards have been furnished, supplemental to the accommodations provided by the city, with an operating room, surgical instruments, dressings, etc. Altogether the supporters of the Polyclinic are showing considerable enterprise and energy in pushing its claims for recognition. The recent affiliation with the University of California has caused some dissatisfaction among the staff. Dr. J. H. Stallard, one of the founders and leading supporters, recently brought suit to annul the charter, maintaining that it had been violated by combining with the University of California, thereby sacrificing its autonomy.

An Illustration of the Infectious Character of La Grippe.

Professional opinion is not unanimous as to the infectious or non-infectious character of *la grippe*. Its sudden onset in a community and rapid spread, in which individuals and families widely separated are simultaneously affected, requires some further explanation than suffices for the exanthemata. The possibility of its transmission by articles of clothing, and the period during which the infective elements can survive, have been discussed without any positive conclusions being reached. English sanitary authorities have during the last epidemic acted upon the theory that the disease was infectious, in advising measures for hindering its spread. This action has been taken more on general principles, and as far as we are aware no positive instance of infection in the absence of an epidemic has been published. The following case is, therefore, of much interest, and has a definite value in establishing the true character of this really formidable disease: In the month of January, 1892, Dr. A. P. Whittell, of San Francisco, when visiting Paris, was attacked with *la grippe*. The seizure was very severe, and was attended by great depression of the heart, which for 11 days beat unremittingly only 30 to 36 times a minute, resisting all artificial stimulation, and was even unaffected by hypodermic injections of sulphuric ether. The illness lasted for five weeks. At that time the disease was epidemic in Paris, and Prof. Bouchard, who was in attendance, had no doubt as to its character. During the latter part of his illness, and subsequent convalescence, the patient constantly wore a Japanese smoking-jacket, and upon his recovery this was packed away with other clothes. Dr. Whittell returned to San Francisco, in March, and shortly after his daughter, aged 12 years, who had enjoyed unusually good health for some months previous, was attacked with unmistakable *la grippe*, followed later by double acute otitis media, necessitating operation. At this time there were no cases of *la grippe* in California, the epidemic having virtually ceased about the end of January. The cause of this attack was not suspected, though the true character of the disease was recognized, but later, it was remembered that the child had made it a practice to carry the identical garment mentioned to her father every evening. On July 7th, the doctor had occasion to wear the fated coat immediately after having taken a very hot bath and while in a state of profuse perspiration, and the following day was prostrated with *la grippe*. The period of invasion in the latter instance was about 26 hours, and the commencement of the attack was precisely similar to the first, and was characterized by a copious watery secretion from the nasal mucous membrane. The attack was a severe one, and was succeeded by gastric complications producing a long and tedious convalescence. It would seem that in this case the relationship between cause and effect was quite clear, and that there can be no source of error. It, therefore, shows that the infective element can survive and remain active for many months, and that, at least in some instances, the particulate infection can be carried long distances in clothes as readily as that of scarlet fever or small-pox. Recent successive epidemics, their great mortality, the severity of attacks, and the disastrous complications have altered our views as to the character of this omnipresent epidemic. It is an eminently serious disease, and one that does not appear to confer immunity from subsequent attacks. It will, therefore, be well to follow the same general hygienic principles in the management of *la grippe* as govern our treatment of the exanthemata; and while the specific infective germ has not been isolated, there should be no hesitation in treating this disease as highly infectious.

SOCIETY PROCEEDINGS.

CALIFORNIA NORTHERN DISTRICT MEDICAL SOCIETY.

Second Annual Meeting, held at Chico, Tuesday, October 10, 1892.

MORNING SESSION.

Address of Welcome.—J. E. RODLEY, of Chico, chairman of the Committee of Arrangements, said: Permit me to welcome and congratulate you upon the circumstances under which we have met on this, the second annual meeting of the Northern District Medical Society. In the world's history the importance of events are not always in proportion to the glamor or the unpretentiousness of their beginning, and history or epoch-making events are not infrequently initiated without attracting the attention of the community. Such was the case in the organization of this Society; it was done quietly, but thoroughly, by a few earnest workers, and to-day there is not a member but is an earnest worker and ready to assist by his best endeavors to make this Society a power in the State that will be felt in future years. Let me welcome you to our city and hospitality; and I assure you, gentlemen, that our earnest hope is that you will enjoy this short rest from your labors, become better acquainted with one another, dropping those petty jealousies which exist in some communities, and striving to further the welfare of this Society, and of mankind. The exchanging of ideas, we hope, will be beneficial to all; and when the labor of this meeting is over, and each has returned to his field of usefulness, may the memory of this day be a bright spot in your life's history. Chico has always had the reputation of hospitality to its visitors; on this occasion, when the representatives of the medical profession are here, the welcome will be more hearty.

Annual Address.—DAVID POWELL, of Marysville, the President of the Society, then read his annual address. (Published at p. 605.)

The Treatment of Endometritis.—J. E. RODLEY, of Chico, read a paper on this subject. The speaker thought it would be more interesting to touch principally on those cases which come frequently to the observation of the general practitioner. For this reason he had decided to take up the subject of endometritis. The causes of endometritis may be divided into systemic and local. The systemic conditions of the body that favor inflammation and suppuration, the most formidable of which, in his observation, had been rheumatism, and typhoid fever with its debilitating effects. The local causes include any that favor inflammation and suppuration as specific infection. The recumbent position in child-bed was a common one. So much did he believe this to be a predisposing cause, that he insisted on frequent change of position during the lying-in term, and urged the woman to visit his office some weeks after parturition, for the purpose of thorough examination to ascertain that involution had taken place. The disease could only occur where a suitable field for the multiplication of germs existed. With this view of its etiology, antisepsis would naturally be the first idea in its treatment. He had formerly employed the compound tincture of iodine, but the usual accompanying-colic had led him to look for other germicides not open to this objection. He thought he had found this happy combination in peroxide of hydrogen. Authorities warned us against the danger of distending the uterine cavity. He believed the colic was caused by the drug used, and not by distension; and that as peroxide of hydrogen was an efficient germicide and non irritating, it should be suitable. In a case of endometritis in a young unmarried woman, after thorough curetting he had injected equal parts of peroxide of hydrogen and hot water previously boiled. There was no colic. The application was subsequently repeated with gratifying results. The speaker had used this method in several cases, one of which was reported, and with uniform satisfaction, combined when necessary with other routine measures.

DR. T. W. HUNTINGTON, of Sacramento, said, in connection with the use of peroxide of hydrogen, that he had himself employed it independently in a similar case, but his experience was too limited to base an opinion upon. He had reasoned that as the treatment of all suppurating cavities consisted first in producing an aseptic condition, he believed that this drug would be as useful here as in other structures, as for example, bone cavities. His practice in these cases hitherto had been to curette thoroughly under ether, and then if rapid contraction of the os followed, to employ a drainage tube. Subsequent and frequent antiseptic cleansing was very necessary in these cases, particularly when a specific cause existed. Regarding the last case reported, he rather differed from the speaker; he thought that a fair proportion of abscesses in this situation were in the cellular tissue rather than in the tube.

DR. W. R. CLEAVELAND, of Biggs, had also used peroxide of hydrogen in these cases, but applied it with a swab after curetting, instead of by injection. He mentioned a case in which a married woman who had had several children, suffered from a number of attacks of recurrent peritonitis. He was called in the last of these, and found a condition of general peritonitis. He employed salines freely, the symptoms rapidly subsiding, with the exception of a swelling in the right iliac region, which soon developed into an abscess. This, with the attack of peritonitis, seemed to imply tubal trouble. The condition of the abscess was such that the tumor could be reached as easily from the abdominal surface as from the vagina. The cavity was aspirated through the vaginal wall, and the symptoms promptly subsided. He had not been able to make up his mind where the abscess originated. Dr. Rodley had said he examined his obstetrical cases four weeks after delivery, to ascertain the condition of things. He thought that it was very important to examine these cases, but believed four weeks was too early to determine the question of involution.

DR. J. H. PARKINSON, of Sacramento, said the custom of examining patients some weeks after confinement was a good one and one, that he followed whenever possible. It was by this means only, that the effect of lesions sustained during parturition, and the result of treatment instituted then, could be ascertained. A careful examination immediately after labor was also desirable. Unless care was taken lacerations were often overlooked, especially in cases where the skin was unbroken and the tear involved the vaginal floor. There was no doubt that frequently, lacerations of the perineum demanding treatment were overlooked. While experience on the part of the obstetrician enabled him to avoid injuries they were still inevitable in many cases; experience would also insure their recognition.

DR. RODLEY said his attention had been particularly directed to the necessity for examination of cases subsequent to confinement, by patients that had come under his observation, in which injuries occurring during labor were not recognized until later symptoms, due to developed disease, aroused the patient's anxiety.

DR. C. H. GIBBONS, of Arbuckle, thought that the abscess in Dr. Rodley's case was in the cellular tissue rather than in the tube. He had met several cases of this character that had been treated for uterine neuralgia, the graver condition not being recognized. He had used peroxide of hydrogen and had found that it was not followed by uterine colic.

DR. O. STANSBURY, of Chico: Dr. Rodley said in all cases that he had used peroxide of hydrogen, he had dilated thoroughly. He believed that this was the cause of the absence of colic, rather than the use of this particular antiseptic.

AFTERNOON SESSION.

Malarial Fever—Turpentine in Diphtheria.—DR. F. W. BENJAMIN, of Oroville, said he had been appointed to read a paper on diseases of children but he preferred taking up the management of cases of malarial fever and reporting some cases from practice. He distinguished three forms of fever—remittent, intermittent and the so-called typho-malarial fever. In the remittent form he regarded quinine, properly administered, as a specific. He did not think it should be given, as was the general custom, in syrup, as this often disagreed with the stomach which was usually in an irritable condition. He gave it in a decoction of coffee, a method that he could recommend. In the intermittent form he regarded quinine as useless. He had seen one patient take 70 grains a day for ten consecutive days and another who took from 24 to 30 grains of quinine for three weeks, and without effect. This disease ran its course, and treatment should be conducted on general principles. The term typho-malarial fever he regarded as a misnomer, conceived by misapprehension and in ignorance. He believed the confusion on this subject, with consequent errors in diagnosis and treatment, were responsible for many fatalities. The speaker closed his paper by reporting several cases of diphtheria, in one of which, where the larynx was implicated, turpentine was given when other treatment seemed to have failed. The patient, a boy 2 years old, was given ʒss doses of turpentine, in the form of emulsion, every 2 hours. Urgent symptoms of dyspnea were relieved during the night by an emetic, when the turpentine was increased to ʒi every hour. The following morning, 36 hours after commencement of treatment, the child had some strangury. The turpentine was suspended for 6 hours, but was resumed in ʒss doses every 2 hours, as symptoms of croup again appeared. This was continued for 2 days and then stopped for 24 hours, when, symptoms demanding its renewal, it was resumed and continued in ʒss doses 3 to 6 times daily for a week. The child made a good recovery.

DR. J. E. RODLEY, of Chico, had found that he could not obtain as good results by the use of quinine in intermittent fever, unless by first preparing the system for it, by the administration of a mercurial. He did not know what to think of the case of laryngitis or diphtheria, whichever it might be termed. The treatment was new; the turpentine had certainly been given in heroic doses, and he would almost fear to use such quantities. The administration of an emetic in this case seemed to be the turning point. He had frequently seen this occur, and it, no doubt, was due to relief of the respiratory symptons.

DR. C. H. GIBBONS, of Arbuckle, thought that Dr. Benjamin's case was one of diphtheria, a disease which he dreaded. He used calomel freely in these cases with aconite, not pushing it to its depressant effects. Monsel's solution was applied locally. As an emetic in these cases, he believed turpeth mineral was best. After the first stage of the disease he used quinine with stimulants freely.

DR. O. STANSBURY, of Chico, said he was not prepared to say whether there was or was not such a disease as typho-malarial fever. He had recently seen a number of cases occurring amongst some foreigners engaged in clearing and breaking new ground. The fever was remittent of an essentially typhoid type with diarrhea. These cases were certainly of a malignant character.

Dr. J. H. Parkinson, of Sacramento, said, no doubt much of the confusion in the nomenclature of these diseases arose from the improper use of the word "typhoid." It was much better to say enteric fever instead of typhoid fever, as the word typhoid was so generally and loosely used in connection with many diseases. If confined to its proper sphere, as denoting lowered systemic conditions—" the typhoid state," the term "typho malarial fever" would simply mean a malarial fever with typhoid (not enteric) symptoms. He did not believe in the entity of typho-malarial fever. In the valleys it was quite common to find the eruptive fevers complicated, at first by malarial symptoms as shown by the high initial temperature.

Dr. T. B. Reardan, of Oroville, said he had found in cases of remittent fever that, unless quinine was used, the temperature would run up. Where this did not control the fever he used the cold pack, and did not fear to continue it for a length of time. He had recently seen an unfortunate visitation of diphtheria in one family, ten out of eleven being attacked and six dying. The treatment used by the attending physician was subsulphate of iron, locally, with solution of bichloride of mercury internally, but the treatment had not materially affected the progress of the affection. As illustrating the malignancy of the disease, one of the children, when convalescent, on being moved one day from its mother's arms to the sofa, suddenly expired. He had never seen such dense membrane.

Dr. W. E. Briggs, of Sacramento, said in diphtheria, where operative interference was necessary, he preferred tracheotomy to intubation; with the latter operation he had had only a limited experience. He did not think that in the later stages of the disease either of these operations were life-saving, but rather enabled the patient to die more easily. During his recent visit to Europe, he found that intubation was being used but little. Regarding treatment, he did not think that conclusions on the subject could be drawn from any one case, or series of cases, or even from one epidemic. Epidemics differed largely in character, some being extremely fatal, and others exceedingly mild. The same disease differed widely under different conditions, and he was rather skeptical of new treatments in diphtheria.

Diseases of the Genito-Urinary Organs.—**Dr. G. W. Stratton**, of Marysville, read a paper upon this subject. For convenience he divided these diseases into specific and non-specific; he would allude only to such as were commonly encountered in general practice. Of these, specific urethritis was one of the most common, while the disease under favorable circumstances was amenable to the treatment, consequences that frequently resulted, as stricture and inflammation of the prostate, were very serious. The cystitis that often accompanied gonorrhea was a very troublesome complication, but less likely to cause after trouble than the foregoing. He did not believe in the abortive treatment of gonorrhea, as that disease was usually well established before medical advice is sought. He thought that heroic measures were often very harmful, and if successful this was to be ascribed rather to an error in diagnosis. Irrigations with a mild antiseptic solution will often modify the disease when employed early. Attention to the condition of the urine was very important. Regarding the sequelæ, he believed that gleet was most frequently a symptom of stricture in some portion of the urethra. Each case of stricture should be considered separately in deciding upon treatment. The object in all cases was to restore the urethra as nearly as possible to its normal calibre and function. He believed that persistent and continuous dilatation was the best method, and that it should always be employed before any operative measures were resorted to. He had tried electrolysis to a limited extent, and had not obtained satisfactory results. In complicated and difficult strictures external urethrotomy was, he believed, the best operation, and with our present knowledge of antiseptic surgery it need not be a formidable one.

Dr. W. R. Cleaveland, of Biggs, agreed mainly with the views of the speaker. He had had no experience with electrolysis. In very difficult and obstinate cases, he believed that external urethrotomy was the best operation. Our better knowledge, and the means placed at our disposal by antiseptic surgery, rendered it safer.

Dr. T. W. Huntington, of Sacramento, after briefly outlining the etiology and pathology of urethral stricture, said: I am surprised to find at this time sincere advocates of external urethrotomy. It would seem that the attitude of many operators in dealing with this lesion by the simpler, safer, and more expeditious method of internal urethrotomy, would have rendered the former obsolete, save in that rare form known as impermeable stricture. After having performed over fifty internal urethrotomies, without an accident or failure, save in a single instance, where there was probably an error of diagnosis, I am prepared to endorse the operation in most positive language. In this work I have followed Otis and Keyes closely. Briefly, my plan is to explore the urethral canal very carefully, thereby locating as accurately as may be, the stricture, or strictures. If a narrow meatus be an impediment to thorough exploration, a reasonably free porotomy is done as a preliminary step. Otis' urethrotome is then introduced, and as many obstructing bands as exist are immediately freely divided. In this connection, Sir Henry Thompson's axiom, "If you cut at all, cut all," should be our guide. The placing of the instrument so that the knife when exposed will strike the offending band, is a matter requiring some degree of manipulative dexterity. I depend largely upon seeing with the tips of my fingers. In other words, I have learned by close observation to be guided by the sense of touch in accomplishing this object, and find less difficulty than in attempting to follow the plan of measurement as laid down by Otis. In dealing with strictures in the deep urethra, I confess to a feeling of uncertainty in attacking them with the knife. Nevertheless, I have frequently resorted to this method where the obstruction was behind the triangular ligment, and have had no reason to regret it. As compared with gradual dilatation, I can only say that I have occasionally been asked to operate on cases that have wearied of that procedure; while, so far as I know, no case of mine has returned to it after having been subjected to the Otis method. I have never done external urethrotomy, except in cases complicated by traumatism.

Dr. Cleaveland wished to add that he had no doubt in his own mind that Dr. Huntington was quite right in the method which he advocated from his own experience. The speaker, however, would prefer, in a difficult case, to do the external operation.

Dr. Huntington said the difficulties surrounding the use of the Otis instrument in the penile portion of the urethra were greatly exaggerated. Below that, great care should be used. The amount of blade exposed was very small, and it was like cutting a narrow rubber band stretched across this blade.

Dr. J. H. Parkinson, of Sacramento, said, in discussing the treatment of stricture, the meaning of the word "cure" should first be determined. He did not think that any one could assure a patient after treatment that the stricture would never recur, as he thought that permanent immunity was exceedingly doubtful. If, however, a cure meant cessation of discharge, the relief of symptoms, the emission of a good sized stream, and the ability to introduce a more or less large metallic sound, then the result could certainly be obtained by gradual dilatation in the majority of cases. The advocates of universal cutting hardly, perhaps, understood what gradual dilatation meant, and indeed failure was generally due to improper methods in carrying it out. There would always be cases requiring urethrotomy, but the majority could certainly be treated by the more tedious and, as he believed, better method.

The President asked Dr. Huntington whether he thought there were more recurrences after dilatation than by cutting.

Dr. Huntington said he was unable to state definitely. He often came across cases that had been treated by other physicians by dilatation, and pronounced cured; these cases had come to be cut. He believed that we came more nearly to effecting a cure by internal urethrotomy than by dilatation, though he was not prepared to say that a radical or permanent cure was possible.

Radical Cure of Hernia.—**Dr. T. W. Huntington** read some notes upon this subject. He said the successful operative treatment of inguinal hernia is contemporaneous with the era of aseptic and antiseptic surgery. Prior to the promulgation of his doctrine by Sir Joseph Lister, efforts for permanent closure of the hernial canal by various procedures had been made with varying and indifferent success. Plugging of the ring by subcutaneous suture at one time found many and enthusiastic followers. At another period, hypodermic treatment with various astringent preparations seemed to answer the purpose. But in turn these primitive methods were abandoned as inefficient, impracticable and dangerous. When it became apparent that the abdominal cavity could be opened with immunity, that sterilized sutures could be buried permanently and without risk, and that superficial wounds could be relied upon to heal uniformly by primary union, the problem of dealing successfully with uncontrollable or complicated herniæ was easily solved. The desired object was accomplished by many different methods. More than twenty different plans have been devised for approaching the pillars, treating the sac, and closure of the ring. After reviewing the MacEwen and McBurney methods, both representing distinct types of operative procedure, the speaker described, as follows, the operation which seemed to him the simplest and most rational of all. A skin incision is made four and one-half inches in length, extending from above the external abdominal ring well down into the scrotal covering. The deeper tissues overlying the sac are at once divided without any reference to the various layers so carefully described by anatomists. The dissection should be done with as little violence to the intervening structures as possible. The sac having been identified should be separated from adjacent tissues by beginning at the neck and working carefully to the fundus. The sac is then opened and freed from its contents, if any there be. A double suture is passed through the neck as high up as possible, and after securely tying these sutures, the sac is cut away and the pedicle returned to the abdominal cavity. The pillars of the inguinal canal are next closed by four to six or seven rather fine silk sutures. The skin wound is now closed by a continuous silk suture and the usual dressing applied. The speaker stated that he had operated in twenty-one cases. In these there has been no fatality nor serious complication. While the later history in many cases was unobtainable, no patient had so far reported a failure or relapse. With slight modifications this was the operation described by Czerny, Langenbeck and Barker.

Penetrating Wound of Chest, by Metallic Cartridge, Involving Lung.—DR. W. R. CLEAVELAND, of Biggs, reported the following case and exhibited the patient. He said: Six years ago, this boy, who was then eight or nine years of age, was injured by the explosion of a No. 12 shotgun, metallic cartridge. It exploded in the capper, and was driven into the chest between the second and third ribs upon the right side. The cartridge was quite out of sight. The speaker was sent for and reached the patient's home at Nelson about two hours after the accident. The boy showed no sign of shock and took ether nicely. One edge of the shell could be felt, and I expected to find a piece of the shell. Taking hold of it with a dressing forceps and using quite a little force I extracted the whole shell. A rush of air followed its withdrawal and breathing continued through the wound. There was pretty free hemorrhage with expiration. The wound was packed with sterilized and carbolized candlewick, and a dressing of carbolized cotton applied. He was by this time again conscious and more comfortable than one would expect. The next day he was comparatively comfortable, but on the third day, about sixty hours after the injury, shock began to appear and for twelve hours he seemed almost *in articulo mortis*. Stimulants were pushed during the last six hours of this time; coffee, brandy, hypodermics of ether and hydrobromate of quinine. When reaction set in, he was turned upon his face and the foot of the bed raised, as suppuration was expected. Drainage was satisfactory. When suppuration had taken place, if he was turned upon the back for a moment he would cough at once and bring up pus copiously. He was kept on his face, and later on his side, with the bed in the position mentioned until all suppuration had ceased. He recovered and has had good health since, with the exception of an attack of *la grippe* two years ago. He was then under the care of Dr. Stansbury, in Chico, and had two slight hemorrhages, but is now in good health. Dr. O. C. Hawkins, of Biggs, who was in attendance upon the case with me, the second day advised strapping the wounded side so that expansion might not take place. There was never any evidence that the pleura was infected. I presume that adhesion took place at once between the costal and pulmonary pleuræ about the wound, shutting off the pleural cavity and preserving the patient's life.

EVENING SESSION.

The Treatment of Pneumonia.—J. T. HARRIS, of Gridley, presented a paper on pneumonia which, in the writer's absence, was read by W. R. CLEAVELAND, of Biggs. The author said, in reviewing authorities upon the subject he was much impressed with the great diversity of the measures proposed. Some writers believing that pneumonia causes relaxation of the walls of the pulmonary blood vessels, advise the use of digitalis and ergot, other authorities, ascribing the danger in this disease to increased arterial tension, placing increased work upon the heart, advise relaxing the vessels by veratrum viride, tartar emetic, etc. It was difficult to explain the satisfactory results reported from treatments so diametrically opposite except by an inherent tendency to recover on the part of the patient. While statistics were very unreliable he believed it could be shown that an enormous excess of mortality prevailed with the depressant method. Briefly, the writer's treatment was as follows: When seen early, hot poultices—not wet but damp—for 24 hours, then the chest is enveloped in cotton-batting covered with oiled silk. If the pulse is full and hard, in a plethoric subject, veratrum viride was given in small doses. Dover's powder was used to relieve pain. Later on he gave alcoholic stimulants freely with carbonate of ammonia. While it was impossible to formulate a general rule for all cases, he believed that whiskey was the sheet-anchor in this disease.

DR. J. H. PARKINSON, of Sacramento, said the divergence in treatment, or rather in the principles underlying it, were perhaps due to want of differentiation of the types of the disease Veratrum was certainly of great value in catarrhal pneumonia, but in croupous pneumonia specific treatment seemed less positive. He should hesitate to depress a pneumonic patient under any circumstances, and believed that stimulants were always indicated, though of course to be given with proper attention to the immediate needs of the case.

DR. C. H. GIBBONS, of Arbuckle, thought that the supporting plan in the latter stages was best, though no general method was universally applicable. If any one drug could be said to be of service in this disease he thought it was ergot.

DR. J. E. RODLEY, of Chico, had tried various remedies and methods, but had not discovered anything that was satisfactory. In the first stages general hygienic attention with, locally, warmth to the chest was sufficient. Later he preferred the muriate of ammonia to the carbonate, though he agreed with the author that plenty of whisky was advisable. He had found Wyeth's beef juice a very useful agent, it could be given cold and with stimulant, and presented nourishment in a concentrated form.

Hip Joint Disease.—DR. O. STANSBURY, of Chico, read a paper upon this subject [to be published]. He entered fully into the etiology and pathology of the disease, dwelling particularly upon the methods and the necessity of early diagnosis. The treatment of the disease was divided into mechanical, constitutional and operative. Rest with extension were the main principles, after confinement to bed for some time. When it is desired to get the patient up, various apparatus might be employed. He had used the long hip splint of Taylor and the New York Polyclinic splint. These splints were exhibited and their method of application demonstrated.

DR. T. W. HUNTINGTON, of Sacramento, said: Hip disease had been thoroughly discussed by the profession in all ages. He thought that with the passing of years we had arrived at some definite understanding upon the subject. The secret of this probably lay in a true recognition of the pathology of the disease. As the author of the paper had stated, most of these cases were tubercular. The exact means by which this tubercular process starts is now tolerably clear. Senn has shown that in tubercular osteitis a tubercular embolus may be carried along in the blood vessels of the bone to lodge in the epiphysis, producing destruction of osseous tissue in a limited area. In tubercular synovitis the emboli lodging in the synovial membrane produced tubercular patches with subsequent joint changes. The splints that were shown, particularly the Polyclinic splint, were excellent and he had seen the latter extensively used. There were many others, all advocated by competent men; personally, the speaker had been in the habit of using the Thomas splint, which he found very satisfactory. Thomas has claimed, as a result of a very wide experience, that none of his cases had ever reached excision; we, however, often came across the cases that had been badly treated; in these, operation was absolutely demanded. The speaker thought that early operative measures in cases where pus had formed within the capsule, and certainly where the pus had got outside the joint, were decidedly advisable. In this procedure two steps were to be considered, (1) erasion, (2) excision. Where pus was found in the joint, the case being seen early, simple erasion was sufficient. When pus has formed sometime since, abscesses having developed and numerous sinuses are present, extensive excision of the bone was necessary. He always curetted freely in these cases, hoping to obtain collapse of the different cavities. In conclusion, he would say, that operative treatment was not the treatment of hip joint disease, but really of its complications and of badly managed cases.

Dr. J. E. Rodley, of Chico, said in all these cases, when seen early, he used extension with absolute rest.

Dr. O. Stansbury, in replying, said he had some little experience with this disease, and his results had been uniformly good. In one particularly unfavorable case, he had kept the patient in bed for ten or eleven months, using later the Polyclinic splint, and with very satisfactory results.

The Importance of Early Recognition of Penetrating Wounds of the Eyeball Associated With Foreign Bodies.—**Dr. W. E. Briggs**, of Sacramento, said, at the request of the President, he would say a few words on the importance of the early detection of penetrating wounds of the eye, associated with foreign bodies remaining in the globe. He illustrated the subject by reporting a typical case that he had recently seen. A boy nine years of age was struck in the right eye while standing near his father, who was working at a forge, about a year ago. The eye was but slightly painful, and the parents believed the sight had recovered its usual acuteness a few days later. There seemed to be some blood exuded, which the mother said disappeared within three or four days. The eye recovered so rapidly after the injury that the parents were quite sure nothing had penetrated the globe, and, therefore, had not sought advice until quite recently. The speaker found a small cicatrix on the cornea, close to the internal border. The pupil was active to light falling on the other eye, but did not react to light falling upon the affected side alone. The lens was partially opaque, the vitreous, grayish white and detached retina could be indistinctly made out. No red reflex could be obtained with the ophthalmoscope and there was no perception of light. There was a mild pericorneal injection and some sensitiveness of the good eye to light. At this late date it is impossible to say whether the eye contains a foreign body. Every evidence indicates that a chip of steel or iron penetrated the eye at the time of the accident, causing traumatic cataract, inflammatory exudate into the vitreous, the contraction of which has produced retinal detachment. Had an experienced man examined the eye soon after the injury he would have been able to determine, at least, the probability of the presence of a foreign body, and it is reasonable to suppose he would have been able to remove it with an electro-magnet. Delay has made the eye totally blind and a source of danger to the remaining organ. The eye looks so well that one hesitates to enucleate. He would, therefore, perform the operation of optico-ciliary neurotomy, hoping to preserve the sightless eye without danger of sympathetic ophthalmia. To attempt to extract the foreign body at the present time would be fruitless, owing to the probability of its being encapsuled within inflammatory exudate. The procedure would be likely to set up a septic inflammation which would most likely be transmitted to the other eye. While speaking on this subject he wished to allude to four cases of extraction of foreign bodies from the eye with the electro-magnet which had come under his observation during the past eight weeks. The first case was one in which the penetrating body had entered the vitreous below the cornea but wounding the iris and producing prolapse of that body. One point of the steel could be seen pressing against the sclerotic about eight mm. from the corneal border. An incision was made through the sclerotic at this point and the steel extracted through the wound. The prolapsed iris could not be reduced and was, therefore, excised. This patient was discharged in fourteen days from injury with almost perfect vision. Two others were taken from the vitreous after having produced traumatic cataract, but both eyes are progressing favorably. The fourth piece was taken from the iris. At least two of these four eyes would have required enucleation previous to the perfection of Hirschberg's electro-magnet.

Report of Treasurer.—The Treasurer, O. STANSBURY, of Chico, presented his report, showing that he had received during the year $90 70 and disbursed $60 25, leaving a balance on hand of $30 45.

Place of Next Meeting.—It was decided that the next meeting of the Society be held at Biggs.

Election of Officers.—The Society then proceeded to the election of officers, with the following results:

President	J. W. CLEAVELAND
First Vice-President	T. W. HUNTINGTON
Second Vice-President	J. E. RODLEY
Third Vice-President	G. W. STRATTON
Secretary	E. E. STONE
Treasurer	O. STANSBURY
Board of Censors	W. E. BRIGGS, C. E. STONE, J. T. HARRIS, T. B. REARDAN, O. C. HAWKINS.

Installation of Officers.—DR. DAVID POWELL, the retiring President, said he felt he had not always filled the position as successfully as he would have desired. He, however, felt that the meeting to-day had been a great success, and with the accessions to its membership the Society was now on a sound and progressive basis. He had much pleasure in introducing his successor, DR. J. W. CLEAVELAND, in whose hands the interests of the Society would receive careful attention.

DR. J. W. CLEAVELAND said he hoped he would retire at the end of the year having given as much satisfaction to the Society as his predecessor had done. He would use every effort to make the Society a success. He trusted that the next meeting would be as successful as that which had now closed. He then declared the Society adjourned to meet at Biggs the third Tuesday in March, 1893.

New Members.—At the various sessions the following were duly elected members of the Society: W. A. BRIGGS, W. R. CLUNESS, C. H. GIBBONS, T. W. HUNTINGTON, G. L. SIMMONS.

SACRAMENTO SOCIETY FOR MEDICAL IMPROVEMENT.

Regular Meeting, September 21, 1892.

The President, G. C. SIMMONS, M. D., in the Chair.

New Member.—H. W. STRADER, M. D., was duly elected a member of the Society.

Minor Complicications of Gonorrhea.—DR. F. L. ATKINSON read a paper upon this subject. He alluded to bubo, abscess and gleet, the result of stricture, as the most troublesome.

DR. T. W. HUNTINGTON did not believe there were any minor complications of gonorrhea but that it was a disease of a very grave character, requiring all the care and skill of the physician to treat successfully. In bubo he did not believe in waiting for signs of suppuration, but in turning out the enlarged gland as early as possible. In the treatment of the discharge he employed copious injections by means of a catheter having openings for retro-injection. He used a solution of chloride of zinc or bichloride of mercury.

DR. J. H. PARKINSON agreed with the previous speaker as regards "minor complications." The disease was undeniably troublesome. He believed the granular patches mentioned by the author could be readily cured if the stricture that usually coëxisted was treated.

DR. G. L. SIMMONS had found the use of copious injections from a fountain syringe, with a return flow catheter, more beneficial than any other treatment. These injections should be repeated every 3 or 4 hours by the patient himself.

DR. H. W. STRADER had found the internal use of bichloride of mercury of great benefit in the treatment of bubo.

The President alluded to a method recently advocated in the treatment of bubo. It consisted in injecting a solution of benzoate of mercury into the base of the tumor. In gonorrhea he had found the use of the return-flow catheter exceedingly painful, especially in the early stages of the disease, and had now abandoned it. He used the ordinary hard-rubber tip that comes with every fountain syringe. With sufficient elevation of the reservoir the solution could be forced up the urethra 3 or 4 inches, and it was very soothing.

Dr. C. E. Fowler spoke of a method advocated by some New York physicians, consisting in the use of an ointment of europhen. He regarded it as good treatment. For more than a year he had used an 8 to 10 per cent. aristol ointment- This was injected into the urethra, which had previously been washed out with a weak sublimate solution. In no case had he, so far, met with any difficulty in effecting a satisfactory result.

SAN FRANCISCO COUNTY MEDICAL SOCIETY.

Regular Meeting, September 13, 1892.

The President, D. W. Montgomery, M. D., in the Chair.

New Members.—Chas. G. Kuhlman, M. D., Gustav Mahé, M. D., and Sidney Bourne Swift, M. D., were duly elected members of the Society.

The Surgical Treatment of Appendicitis.—Dr. J. D. Rosenstirn read a paper upon this subject. He commenced by describing the anatomy of the processus vermiformis. Of all omnivera only man, the ourang-outang and the wombat have an appendix. Its relation to, and insertion into, the cecum, as well as its shape, are very variable. In support of this he exhibited illustrations, and one specimen 18 cm. in length. The question arises, why should there be retention of fecal matter or of foreign bodies within its lumen. Gerlach was the first to demonstrate the reason in a valve-like annular projection of the mucous membrane around the insertion of the appendix, that allows the entrance of substances, but more or less prevents their getting out. This is most pronounced between the third and twelfth year, least in the first two years of life and after fifty years.

The wide-spread opinion that the processus vermiformis is only partially covered with peritoneum, and that consequently abscesses resulting from inflammation or perforation are extra-peritoneal, has been disputed by the anatomist Bardeleben, and later by Luschka. They showed that the appendix is invariably covered with peritoneum and lies intra-peritoneal on that part of the peritoneum that covers the ileo-psoas. The great frequency of diseases of the appendix has been shown by Dr. Toft, Prosector of the Frederick's Hospital at Copenhagen, who in 300 autopsies found a residual appendicitis in 35 per cent. Others have come to similar conclusions. The mortality of these cases seems very high. Mattenstock in his monograph on Appendicitis gives the mortality in a series of 977 cases as 30 per cent; children up to 15 years, 70 cases, 70 per cent; of 12 children under 6 years, 11 died. The unusually large experience of Fitz, who gave this disease the name of Appendicitis, showed that five-eighths of all his 257 cases and one-fourth of cases that had been treated medically only, should have been operated upon. We must not forget, however, that these are hospital cases, and cannot be compared to those in private practice, where we meet with a great number of lighter cases. The cause of perforation is generally a concretion of hardened feces, and very rarely a foreign body, as seeds and cherry-pits. According to Mattenstock, in 146 cases, only 9 were foreign bodies; according to Fitz, only 18 in 152; and Krafft gives four in 106. The pressing demand for early operations belongs originally and principally to American surgeons. Mynter, in Buffalo, was the first who in a paper read before the Buffalo Medical Association in 1879 insisted on early operation for abscesses resulting from appendicitis. Leyden, in Berlin, recommended in 1884 early operation for perforating peritonitis, an opinion shared during the discussion by many of the leading Berlin surgeons. This recommendation was carried out in the first successful operation for peritonitis from perforation of the bowels, by Mikulicz, in Königsburg, in 1885. In the article by Fitz, already referred to, he conclusively showed the advisability of energetic surgical measures in appendicitis. He was followed by McBurney, Weir, Wyeth, Stimson and Senn in this country, and Treves in England. But to McBurney, of Roosvelt Hospital in New York, more than to any other surgeon, belongs the credit of having systematically proven the necessity of early operations with and without symptoms of abscess formation, and of the plea for intermediate operation. The most important and difficult question is when to operate. This question arises chiefly in acute cases; for the necessity of opening collections of pus, when they can be determined, is a matter beyond dispute. The patient is attacked with vomiting and pain in the right iliac region, his bowels do not act, or he has frequent desire to go to stool. The temperature ranges from 102° to 104°; pulse 100 to 130; distinct tenderness on pressure over McBurney's point, and dulness on percussion in the right iliac region. How long may we wait before operation. He believed that if after this violent commencement of the disease, vomiting still continues, the temperature and pulse do not go down, and the pain on pressure and local tenderness increase, an operation should be performed forthwith.

McBurney lays great stress on the pulse; he considers a pulse of over 100, together with the other symptoms mentioned, as a positive indication for laparotomy. This certainly is a very wise suggestion, and should be followed in the majority of cases. We may not always find perforation under these circumstances, but always enough to justify the operation. How important such a rule is, and how treacherous even apparent symptoms of improvement may be, was illustrated very forcibly by some of the speaker's cases, and also by the famous case of Gambetta. In an article recently published in the *Medical Record*, Baruch, of New York, gave as indications for immediate operation, symptoms of shock, anxious countenance, finger-tips, nose and ears cool, pulse and respiration out of proportion to temperature, the right inguinal region very tender, the patient usually lying with right leg drawn up. One or more of these symptoms may be absent, and still the need for operation be very urgent. All these do not apply to catarrhal appendicitis, mild cases that get well by rest, diet, and hot poultices; but where concrements in the appendix and gangrene are imminent, or present; a collection of pus around a perforated appendix walled in by adherent coils of intestine, and danger of abscess perforating into the general peritoneal cavity. In a number of cases the patient recovers from one attack, remains well for a time; another attack comes on, he gets a repetition of more or less severe attacks, which make life a burden and leave him weak and miserable in the intervals. For these cases McBurney also advises operation, if possible, in the free intervals.

The speaker then described an operation which he had performed 8 times. In 6 of the cases perforation of an abscess into the general peritoneal cavity had already caused general septic peritonitis. All these cases died in from 3 to 24 hours after operation. The remaining 2 cases in which perforation had not taken place recovered. He exhibited several pathological specimens, and alluded to Sonnenberg's operation, which is performed in two stages, the opening of the peritoneum being deferred. This the speaker did not recommend.

Dr. M. Krotoszyner said it is very hard in a number of cases to decide whether the conservative treatment (opium and ice) or an operation is indicated. All practitioners would admit that there are often cases where alarming symptoms indicated immediate operation; yet where an operation was refused by the family or the patient, after a short while recovery took place through internal treatment. We are not yet able to say in all cases of appendicitis, that the patient will die unless an operation is performed. Though Dr. Rosenstirn has tried to give us an exact symptomatology whereby we can decide to open the abdomen, yet one might any day be called to a case of perityphlitis where extensive practical experience and theoretical knowledge will fail to show precisely what treatment is indicated. While the surgical treatment of appendicitis is a distinct step in the progress of medicine, yet we should not forget that operation should only be the *ultima ratio*, and it should not be performed where internal treatment will suffice. The speaker mentioned two cases, in both of which his opinion was opposed to that of the gentlemen with whom he consulted. He had advised immediate surgical interference; in neither case was the operation performed. One patient died, the other recovered after a few days.

Dr. Winslow Anderson said that it was desirable to operate in cases of appendicitis as early as possible after the diagnosis had been made out, if the patient did not improve. He would give a patient 36 to 48 hours to show signs of improvement. To wait for the formation of pus or perforation was, he thought, very undesirable, as the mortality was vastly greater in such cases; whereas an aseptic excision of the appendix was attended with a minimum amount of risk. The speaker also stated that as the appendix vermiformis was useless, the earlier it was removed, if diseased, the better, as patients were extremely liable to recurrent attacks of appendicitis.

DR. ROSENSTIRN, in replying, said it was impossible in private practice, to carry out the suggestions of Dr. Farnum, to operate as soon as disease of the appendix can definitely be made out. This can be done in hospital wards, but it was not possible in private practice. Parents and relatives will object, and perhaps justly, to an operation in the initial stages. As an aid to early diagnosis he employed bimanual examination with two fingers of the right hand in the rectum and the left hand on the right ileo-cecal region. The fingers in the rectum can detect the difference in pain when pressing to the right or left side of the pelvis, and can in a good many cases detect a mass behind the rectum pressing the right side of the rectal wall more or less forward. Regarding the incision, he did not agree with Dr. Shiels. He believed an incision 4 to 6 in. in length, 2 in. inside the anterior superior spinous process commencing at the umbilicus and going towards the middle of Poupart's ligament was best. As to certain landmarks about the mesentery of the cecum, he thought they were practically valueless. The operator should rely more on the sense of touch and should not try to separate the parts sufficiently to make an ocular inspection. Time was always an object; if pus is present it should be found and evacuated, then the appendix should be recognized, ligated, removed, and the stump cauterized and the operation finished. He also did not believe in immediate closure of the wound, even in case of resection of the process without abscess. He advised leaving strips of iodoform gauze as safety valves, to be removed after 48 hours, or later.

CALIFORNIA ACADEMY OF MEDICINE.

Regular Meeting, August 20, 1892.

L. ROBINSON, M. D., in the Chair.

DR. D. D. CROWLEY read a paper on "A Rapid Method of Locating Intestinal Wounds by the Use of Hydrogen Gas and an Antiseptic Fluid" (published at p. 617). He said this method acted with great rapidity. In four cases out of five, after the gas passes the ileo-cecal valve, a wound of the intestines is found in one minute. He did not think it was as useful in locating wounds of the stomach as those of the intestine. The stomach being a muscular organ, as a rule prevented the gas from escaping, unless the opening was quite large.

DR. D. W. MONTGOMERY, said the experiments were excellent, and several good points were brought out. For instance, the length of time it took the gas to reach or pass the ileo-cecal valve through the feces. Ten minutes is a long time in an operation, but it is well spent if we know that it takes that time and we get the desired results. He asked Dr. Crowley why the gas did not pass through a wound in the stomach, was it due to the intricate arrangement of the structures of the wall or to muscular contraction?

DR. J. F. MORSE said it seemed that Dr. Crowley's experiments gave us definite means to locate wounds of the intestines in the human body. Quite frequently a wound of the intestine, even a gun-shot wound, would escape careful search. He thought, however, that Dr. Crowley's plan would be difficult to carry out in the human subject, as in order to observe the bubbles of gas that arise through the carbolized solution, the surgeon would be compelled to make an immense incision in the abdomen; if such was the case, it would be very difficult to keep the intestines in the cavity, fill the cavity with fluid, and when the intestines become inflated, keep them under the fluid. He thought Senn spoke of this, but that he lit the gas as it escaped. This method would be better, as there was not the risk of burning your patient.

DR. WM. A. MARTIN asked if it were not possible that the gas might escape into the esophagus, thus preventing its escape through any wound of the stomach, as under an anesthetic the sphincter would be relaxed.

DR. H. KREUTZMANN thought this was of great importance in gynecological work, as in laparotomies the intestine might quite frequently be wounded and escape observation. He recalled one case in Vienna that died from a perforation of the intestine that had been overlooked. The method would also be useful where adhesions were present and the bowels were much handled. For his part he would use boiled water instead of carbolized water to fill the abdominal cavity.

Dr. L. Robinson asked Dr. Crowley what was the strength of the carbolized water used?

Dr. D. W. Montgomery said he remembered a case in New York, under the care of Dr. Bull, where seven wounds of the intestine were located and sewn up, the case ending favorably.

Dr. Jas. Simpson spoke of a case where the patient had been gored by a bull, causing a severe lacerated wound of the intestine, which healed nicely. He asked Dr. Crowley how he treated intestinal perforations when he had located them.

Dr. Crowley, in replying, said he believed that the non-escape of gas from the stomach in case of small wounds was due to muscular contraction. He had observed the phenomena several times in his experiments. Regarding the strength of the carbolized water, he had used a ½ per cent. solution. He did not see any reason why a human being should not recover from this operation as well as a dog. A dog will throw itself about, get the bandages disarranged, dirtied, and soiled with urine, which was not so with a man. He could not see why the belief existed that a dog would recover better than a human being. As regards the time wasted, there need be none; the gas can be forced up the bowel while the surgeon is making ready for the operation, and as it usually passes the valve in five minutes, this is not so long to wait. In his first experiments a year ago, in a few cases it took ten minutes to reach the valve. The gas and water test required some dexterity, and he believed no surgeon should operate until he had practised on the lower animals. He made a two or three-inch incision, and by the hands, guarded by a warm, moist towel, the intestines could be kept in, and the bubbles would guide the operator to the wound. Regarding the escape of gas by the esophagus, it depends on the degree of anesthesia. If the dog is dead, then the gas passes quickly; if deeply anesthetized, rather quickly; if lightly, the stomach will dilate pretty well. Hydrogen gas had been used, as it is lighter than others, and inflates quicker. In the treatment of intestinal wounds he used silk, and the Lembert suture.

Dr. Morse thought that the subject of intestinal surgery should be discussed at the next meeting. There was an immense amount of literature on this subject. Billroth, he believed, reported fifty or sixty cases last year. Members could look the matter up, and no doubt do it justice at the next meeting. He also thought it would be very interesting if Dr. Crowley could demonstrate his method before the Society.

A New Fixation Needle.—**Dr. H. Kreutzmann** exhibited a needle for fixing the uterus to the anterior walls. A sound is forced into the bladder, and the instrument is introduced into the previously anteflexed uterus. By an arrangement a needle is passed through the anterior wall of the uterus into the vagina, a silk thread is attached, and drawn back into the uterus and tied, to be removed in two or three weeks. The instrument somewhat resembled a Belloc's canula.

Rapid Method of Cleaning a Hemacytometer.—**Dr. D. W. Montgomery** showed a rapid method of cleaning a hemacytometer, by adjusting an ordinary syringe to the rubber tube, in order to drive out the cleansing fluids that had been previously drawn into it by suction.

Regular Meeting, September 17, 1892.

L. Robinson, M. D., in the Chair.

The Localization of Intestinal Wounds by Means of Hydrogen Gas and Fluid.—**Dr. D. D. Crowley**, by request, demonstrated on a dead dog the localization of intestinal wounds by means of hydrogen gas and fluid. He stated that in the dead subject the hydrogen gas escaped freely around the rectal tube, as well as by the mouth; the anus should therefore be held firmly against the tube. It requires four or five minutes for the gas to pass the ileo-cecal valve, during which time the bowels can be manipulated. When the intestinal wound is found the rest of the bowel is returned, and a warm towel wrapped about the part to be operated on. Fecal matter will escape. This can be prevented during the operation by simply putting a common rubber elastic band around the gut, an inch or so from the wound, and on each side of it. A small hole in the mesentery can be punched out, that the elastic ligature may be passed. These are tied, or secured sufficiently to prevent the passage of feces, but not tight enough to strangle the blood supply. The gut can then be washed out through the wound by means of an ordinary syringe. In closing the intestinal wound, the speaker places the first suture near the centre of the opening, through the serous and muscular coat. The next one is placed equi-distant from the first and the end of the wound. They are then cut off close to the knot. By sewing properly the sutures should be about one-eighth of an inch apart. A wound of the kind shown (incised) should be followed by recovery, unless some complication set in. In about four days the sutures would become covered with a plastic exudation, which in a week would hide them, and in two weeks they would begin to slough into the interior of the gut, and in three or four weeks no suture could be found. Another point he wished to bring up was, that where an artery passing to the intestine was bleeding, he would advise not to ligate it, but to suture it to the intestine, as the bowel seemed to derive more nourishment from it. When a part of intestine has been cut by a bullet, he made an incision on each side of the wound large enough to admit a rubber ring, constructed of segments of drainage tube strung on catgut. These two incisions were then approximated and the rings sewn together. The rings [*vide* MEDICAL TIMES, Vol. V., p. 497] are armed with four threads and needles, and when placed in position in the intestine, the opposing sutures or threads are tied, and coaptation sutures placed in between. The rings are left in and pass away by the bowel. There is no stricture to speak of, as the intestinal contents act as a dilator. The ring anastomosis was a success on the dog, but may not be so on man, probably because the gut of the dog has more muscle. In case the mesentery was torn from the gut for an inch or more he sewed it to the serous and muscular wall of the gut, care being taken not to carry the sutures clear through.

Dr. James Simpson asked if the animal's bowels were kept constipated before and after the operation, and if not did he use an enema?

Dr. Crowley said he kept the bowels constipated for six or seven days after, as peristateses interfered with the healing of the wound. He used an enema when the wound was not in the colon.

Dr. G. M. Terrill inquired why the operator placed the first suture in the centre of the wound?

Dr. Crowley said it acted as a guide and prevented the wound from poruting. In reply to Dr. Tait, he said, one row of sutures was sufficient.

Dr. G. F. Shiels said that by the old method three-quarters of an hour was frequently spent in looking for an intestinal wound, and even then it might not be found, but by the use of gas we find it in five minutes. The fluid simply brings out the bubbles. Supposing the wound was in the right iliac forsa or in some other deeply situated part of the cavity, if a median incision were made, the bubbles seen and followed up, how could the operator locate the wound precisely?

Dr. Crowley said he would have to follow up the line of gas bubbles. This came directly from the wound and in a straight line. After suturing, the gut should again be inflated and submerged, to be certain of locating other wounds.

Dr. D. W. Montgomery said the elastic ligature suggested by Dr. Crowley was very ingenious; it was a great thing; it was easy to apply, did not hurt the gut and was quickly taken off. He congratulated Dr. Crowley on this.

Dr. George Gross said he had seen almost this method applied in *post-mortem* examinations as in pneumothorax, where the pleural cavity is filled with water and air is blown through the larynx; applied to intestinal wounds it was new.

Dr. Shiels said that the profession owed a debt of gratitude to Dr. Crowley. Lots of facts are known, but it took a good man to apply them. Dr. Crowley has been working for a long time on this subject, and what he says must be taken as definite and correct. There was one peculiar fact he wished to speak of: that was, if there were a growth such as cancer of the intestine, and an anastomosis is made removing the growth and a loop of intestine, the case would very surely end fatally. If the anastomosis were made and the loop left, the case would get along better. How this is he did not know. Was it from shock or from the amount removed?

DR. F. J. HUND inquired whether the gas might not force fecal matter into the abdominal cavity? He also asked, was there not some danger of poisoning from the arsenic in the zinc that was used to generate the gas?

DR. CROWLEY, in replying, said: The gas was so light that it did not expel fecal matter. He had, besides, never yet seen a wound of the intestine, especially a gun-shot wound, where the fecal matter had not escaped into the cavity. There was no danger from arsenical poisoning when using gas. He had never found the intestines so inflated after the sutures were in place as to prevent the abdomen from being closed. Even if they were, they could be manipulated. One year ago, at the meeting of the State Society, he took a loop out, made an anastomosis, ligated, and the loop below became atrophied and the ligature sloughed into the gut. He had removed one and two feet with recovery, and he thought several feet might be safely removed. If six feet were removed he thought the shock through the sympathetic system was what killed. He believed that a cancerous growth, if limited to the intestine and mesentery, should be cut away. In conclusion, the speaker stated that in Oakland he had facilities for performing operations, and if any member of the Society would care to see any particular operation and would let him know a day or so in advance that he might procure a subject, he would gladly show anything in his power.

Monocular Hydatid Cyst of Liver.—DR. DUDLEY TAIT mentioned a case of monocular hydatid cyst of the liver he had lately operated on. In several ways it was of interest. (1) It filled the entire abdomen and distended it to quite a degree. (2) There were numerous adhesions; it required twenty or thirty minutes to break up these, nearly one-half of the omentum was tied off. (3) Aspect at point, lower border of right lobe of liver, very small pedicle and easily ligated. (4) The vast number of daughter cysts, explaining the ineffectual attempts to tap it.

DR. D. W. MONTGOMERY asked if there was any thrill present.

DR. TAIT replied there was a sense of fluctuation, but the tension was so great nothing definite could be made out. The diagnosis was mostly through percussion.

DR. G. F. SHIELS believed in removing such cysts at once and not making two operations, as this was liable to sow the disease. Dr. Tait got out the cyst without wounding it, which was a very good piece of work.

DR. ROBINSON asked Dr. Tait if he had extirpated the cyst or laid it open, and whether he had ever seen a similar case.

DR. TAIT, in replying, said he had had three cases within the last two years; it was always best to try to extirpate *en masse*. In one case he had resected the seventh and eighth ribs and removed the cyst. In this case the trocar gave no light, in diagnosis there were no hooklets in the escaping fluid. Tapping he considered non-surgical; one does not know where the instrument is going in the abdomen, and the procedure is liable to set up suppuration, besides the danger of scattering scolices over the peritoneum.

SAN FRANCISCO SOCIETY OF EYE, EAR, NOSE, AND THROAT SURGEONS.

Regular Meeting, October 6, 1892.

Occlusion of Posterior Nares following Diphtheria.—DR. M. C. O'TOOLE presented the case of a Japanese student of the State University, at Berkeley, who had had diphtheria 13 years since, from which time there existed a total occlusion of the posterior nares, produced by a fibrous growth binding the soft palate to the posterior pharyngeal wall. The speaker had experienced some trouble in freeing the palate, as there was a constant tendency to form new adhesions. Finally, after the third operation, the patient was taught to introduce the nozzle of a hard rubber posterior nasal syringe, and separate the parts from time to time. The parts were allowed to heal, and the patient now breathes freely through the nose and articulates distinctly.

Fracture of Orbital Plate.—Dr. K. Pischl presented the case of a lad 16 years old, who, eight years since, fell some little distance, striking the right cheek, from which injury there still remains a small scar over the right malar process. *Status presens*—Right eye turned upwards, moves upwards and downwards freely, but cannot be brought down as far as the left eye. Outward and inward motion is normal. Patient sees double, images homonymous. The right image being lower than the left, the images maintain the same relative position on movement of the eyes. Left eye 1° hypermetropic. Right eye hypermetropic and astigmatic. Right eye sets deeper in orbit than the left. Evidently a disturbance of function of the inferior rectus muscle. The speaker suggested a fracture of the orbital plate as a probable cause. He proposed to do a tenotomy of the superior rectus to correct, if possible, the diplopia.

Dr. A. Barkan thought there might have been an injury to the nerve filament of the inferior rectus at time of injury.

Dr. Geo. H. Powers regarded it as an arrest of development dating from time of injury.

Dr. W. A. Martin believed there was a direct injury to the muscle by a penetrating wound at time of accident.

Unique Gunshot Injury.—Dr. M. C. O'Toole reported a case of gunshot injury, that was unique. The bullet passed through the left nostril producing no injury there, and 7 days later was taken from the external auditory meatus of the right ear. The speaker promised to present the patient in the near future, when individual examination might result in a more satisfactory discussion of this interesting case.

Foreign Bodies in the Larynx.—Dr. A. Barkan mentioned the case of a lady whom he supposed to have a fish-bone lodged in larynx. An effort was made to remove it, but with uncertain success. The patient had profuse expectoration for a couple of days, but now the inflammatory symptoms are subsiding.

Dr. Carroll mentioned the case of a lady in London with some reputation as a singer, who was supposed to have inhaled a piece of walnut while dining out. Dr. Carroll placed her in a cab and drove to McKenzie, who was not home. He then went to Hoval, who advised waiting, though the speaker was in favor of tracheotomy at once. The objective symptoms were a slight roughness of breathing over left bronchus, followed a couple of days later by moist rales and copious expectoration, tinged with blood. On the ninth day a piece of walnut kernel as large as the end of the index finger was coughed up. This was followed by prompt recovery, but the patient has not recovered sufficiently to permit of singing.

Dr. W. A. Martin referred to the case of a child in Schrötter's clinic in Vienna, in which a triangular piece of chicken bone was lodged between the vocal chords, presenting the long edge upwards, for a period of six weeks without causing any untoward symptoms beyond a roughness of voice. The foreign body was removed by Prof. Schrötter, after which the voice soon recovered its natural tone.

Adenoid Vegetations in the Naso-pharynx.—Dr. A. Barkan reported the case of a young man, 30 years of age, sent to the speaker by a prominent aurist of New York, to continue treatment. Chronic deafness had been diagnosed with which he coincided. All efforts at catheterization or politzeration were unsuccessful until adenoid vegetations were discovered in the vault of the pharynx, after removal of which, both methods were easy of accomplishment. Patient made a rapid recovery, acquiring normal hearing. The case was particularly interesting on account of the age of patient.

SPECIAL CORRESPONDENCE.

LONDON.

[FROM OUR OWN CORRESPONDENT.]

The Danger of Great Britain during Epidemic Prevalence of Cholera in Continental Ports.—Cases Imported this Year Failed to Spread.—First Line of

Defense; Medical Inspection at Ports.—Second Line of Defense; Notification of Infectious Diseases.—The Failure of Quarantine Abroad.—The Third Line of Defense; The Purity of the Water Supplies—The Dangerous State of London.—The "Filthy and Unwholesome Aliens" Order.—The Antivivisectionists—Next Year (?)

The presence of epidemic Asiatic cholera on the continent, and the importation of numerous cases from Northern European to English ports has, of course, aroused a great deal of interest, and the public has watched with anxious curiosity to see how far our boasted sanitary legislation and administration would be able to combat the plague with success. The first encounter is drawing to a close, and so far all has been in favor of the defense. I say the first encounter, for there is a great probability that there may be a recrudescence of the epidemic next year on the continent of Europe, and whenever there is cholera on the continent the position in this country is one which must demand great vigilance. The amount of stated daily traffic between London and certain continental ports is enormous. I find on consulting Bradshaw that during the present summer there have been running no less than 64 direct rail and steamboat services weekly between London and Paris alone; this is an average of rather more than 9 a day, Sundays included There are 27 services a week with Ostend and Antwerp, and 20 with Flushing and Rotterdam. These are only the fast passenger routes. To take another example, and one that has a special application this year, I find that there were no less than 21 stated services a week running between English and Scotch ports and Hamburg. When, therefore, it became known that Asiatic cholera had broken out in a serious form in Hamburg, it was at once evident that the problem before our sanitary administrators was no easy one, for the stated passenger service constitutes, of course, but a small part of the actual trade between Great Britain and Hamburg.

Cholera has been introduced within the last four weeks into some twenty British ports, but in no case has it spread. There have been in all about 30 cases, with 10 deaths, but in no instance did the sufferer contract the disease in this country. It is generally felt that this result has reflected great credit on our health officers. It has been attained at a minimum of cost and inconvenience to travelers and merchants, and without the application of quarantine. In one instance, at a small port (King's Lynn), a ship was refused admission to the port and sent away to sea, but with this exception, so far as I have been able to ascertain, no passenger has been delayed more than at most a few hours. On the arrival of a passenger ship from a continental infected port, she is boarded by a medical officer appointed by the Local Government Board, or by the Port Medical Officer. Every member of the crew passes before him and is questioned by him. During this process, which in each individual case takes only a few minutes, it is quite possible to detect signs of illness, and such cases are reserved for more minute examination. Steerage passengers next pass in order before the examining medical officer, who ascertains the places from which they have come and whither they are going. Then the other passengers are inspected and questioned in like manner. When the inspection is complete the gangways are run on board or the tender is run along side, and communication with the shore is permitted. Before this inspection, however, it ought to have been said, the examining medical officer has received a report from the captain, who again has had reports from the stewards and stewardesses, so that special attention is at once called to any passenger who has presented symptoms of diarrhea during the passage; the railway companies, which own most of the short-passage steamboats, have given very strict injunctions to their officers as to the reporting of all cases of diarrhea, which can hardly escape the observation of the steward's staff, and it is no officer's interest to conceal such occurrences. The fact is, that the precautions taken and the manner in which they have been carried out have commended themselves to the common sense of the community, and to the interests of the carriers, and the medical officials have everywhere been cheerfully seconded.

The examining medical officer can obtain an order directing that all water on board a boat shall be disinfected and run away, and the tanks disinfected. He has the same power as to bilge-water, and the disinfection of the bilges, etc. The power is used in all infected or suspected vessels, and as a rule in vessels coming from infected ports, except in the case of the short-passage routes which obtain all water and provisions on this side. All ship's laundry work on these routes is also done on this side.

When the medical officer discovers on his inspection a case of cholera, or a case reasonably suspected to be cholera, or to have recently suffered from cholera, the patient is removed to the isolation hospital, often a floating hospital, the other passengers are examined with care, and their names and addresses taken, and the local authorities of the districts to which they are travelling advised, if it appears desirable. The ship, after landing passengers, is ordered to some convenient place where the process of disinfection is carried out before the crew are allowed to land. In the isolation hospital rigid disinfection of all excreta is carried out, and the goods of the sufferer are also disinfected or destroyed by fire.

This is our first line of defense against cholera, and there is no doubt that it has succeeded in a manner which ought to go far to convince sceptics of its efficacy. In the case of large well-appointed lines belonging to responsible companies, a certain amount of reliance is no doubt placed on the report of the ship's officers, and on the whole it has been made more to their interest to speak the truth than the reverse; but the all-important link in the chain is the judgment of the examining medical officer, and that has not been at fault in any case, though on two occasions seamen have developed the disease on shore some hours after the inspection. In these cases our second line of defense came into action. This is the compulsory notification of infectious disease combined with immediate isolation of the sufferer in a properly-equipped and properly-officered isolation hospital.

So far so good. We have been at great pains and expense to elaborate measures of precaution to prevent the importation of cholera into our midst, and they have worked marvelously well. Inspection has surprised nobody by once more proving itself an effectual instrument, while abroad we have had numerous demonstrations that quarantine is as useless as it is expensive—that it is in fact a source of danger to the country which it is supposed to protect. It has been indeed quite curious to note how rapidly quarantine has broken down during the present epidemic. We have read a telegram to the effect that such and such a country or port has imposed so many days quarantine against certain infected ports; a week or two later we have read another telegram: "It is now admitted officially that cholera is present in this city"; and then followed the list of cases and deaths. Quarantine to be effectual must be read to mean total exclusion; it is so understood in one or two smaller colonies and dependencies of the British empire. If, as at Malta, you can completely arrest all commerce without causing anybody any particular inconvenience, and if the colony is a small island with a coast line easily watched, it is quite feasible to isolate your colony from the outside world, and, *argal*, from cholera. Short of this, quarantine is a fraud.

Our third line of defense is our water supply, and we can only be devoutly thankful that it has not been tested. If by bad management, or bad luck, at the ports, cholera gets through into the valley of the Thames, London will be on the brink of a catastrophe. The greater part of the water drunk in London is obtained from the Thames and filtered through ordinary gravel filter-beds. The drainage of many growing towns and of hundreds of villages goes, more or less directly, into the Thames, so that if an outbreak occurs, say at Staines, nothing but a miracle can save us from an outbreak in London. The position of Liverpool is altogether different, as it has now begun to use the pure mountain water from its great reservoir in Wales. This is very important, since at every cholera scare emigrants from infected localities will tend to be arrested, and to accumulate in that port. London is, happily, not a port much used by emigrants in transit.

One other regulation which has recently been put in force ought also to be mentioned in enumerating the measures of defense taken against cholera. This is the order dealing with "filthy and unwholesome aliens"; under it no alien of the class indicated, arriving in any English port, will be allowed to land until he has furnished the proper authorities with his full name, destination, and precise address, so that he may be traced, and kept under observation for such time as may be thought sufficient. The effect of this has been to check, if not to stop altogether, the emigration of pauper aliens into Great Britain, but especially into London. Such people as a rule have no known address to which they shall proceed. The check to the increase of the alien poverty-stricken population of the metropolis has been hailed with satisfaction for other reasons than the removal of one source of danger from the importation of cholera. The continued influx has seriously disturbed the wage-rates in certain trades, and directly produced an appreciable amount of poverty in the East End.

It is probable there will be a recrudescence of cholera in Europe next spring, and this country will be again subjected to a severe test, with this disadvantage, that the epidemic may appear at Baltic ports at an earlier date than this year. Further, the possibility of an outbreak in Black Sea ports can not be set aside. The Mediterranean will then become infected, and this will very seriously increase the number of ports doing business with Great Britain which will be under the suspicion of sending us infected ships.

The Church Congress, which is now sitting at Folkestone, the birthplace of Harvey, gave up an afternoon sitting to discuss the question: "Do the interests of mankind require experiments on living animals, and, if so, up to what point are they justifiable?" The case for medicine was to have been opened by Sir Andrew Clark, the President of the College of Physicians, but he had only left the death-bed of Tennyson that morning and telegraphed: "My sympathies with experimental research are strong and unwavering; the law of sacrifice is the law of life, which no one can escape; and provided it is conducted with reverence for necessity, and under supervision, I regard experimental research not as a mere privilege, but as a moral duty." His place was taken by Dr. Samuel Wilkes, who before commencing his speech asked how it was that Mr. Lawson Tait was not present, and it was explained that he had not come because he was not a member of the Church of England. No doubt this was a great loss, for the two medical opponents of experiments on living animals who did appear made a very poor show. Of one of them, Mr. F. S. Arnold, of Manchester, I have not before heard; he asserted that we owed to vivisection no discovery of proved value and importance either to medicine or surgery. The other was Dr. J. Clark, a homeopath, who said that animals could not be anesthetized. Bishop Barry (a colonial "returned empty") repeated a number of stale stories from Miss Cobbe's book, and Mr. Victor Horsley, who followed him, showed that this book (*The Nine Circles*) was a tissue of misrepresentation, and gave examples of *suppressio vesi* and *suggestio falsi* of which the authoress had been guilty, particularly the suppression of the fact that anesthetics were used. He twitted Mr. Lawson Tait with his action in this matter. Mr. Tait, he said, wrote and spoke to the general public denouncing experiments, but at the Nottingham meeting of the British Medical Association which he attended he did not oppose the resolution affirming the utility of experiments on living animals, and as a member of the Scientific Grants Committee of the British Medical Association he had not opposed the granting of £600 a year for the furthering of the progress of medicine and surgery by scientific experiment. Dr. Armand Ruffer also spoke in defense of experiments, and the Bishop of Manchester who spoke on the other side, unintentionally created a good deal of amusement by asserting that his sympathy with animals was so great that he "would abstain from animal food if any one would show him how he could live without and keep his voice." This was too much even for the parsons, who shouted with laughter at such an admission of flabby inconsistency. The Bishop of Edinburgh made a spirited speech in which he repudiated in the name of the Church the wild statements and incoherent conclusions of his Episcopal brethren. The meeting then came to an end without the taking of a vote, which is against the rules of the Congress.

LONDON, October 3, 1892.

MUNICH.

The Royal Hospital for Women.—Its Three Departments.—The Staff.—The Obstetrical Department.—Methods of Disinfection and Conduct of Labor.—The Polyclinic.—Clinical Lectures.—Number of Students in Attendance.—Facilities for Instruction.—Other Institutions at Munich.

As my term of service under Prof. v. Winckel is now drawing to a close, some information regarding this famous institution may be of interest to the readers of THE MEDICAL TIMES.

The hospital is divided into three departments: (1) The obstetrical wards, with 2 confinement rooms, each containing 3 beds; but when necessary these can be increased to 5 without overcrowding. An adjoining room which serves for examinations, in which patients are first received to determine whether they are in labor, and if not, in which month of pregnancy. (2) The gynecological wards, in which patients are arranged in three groups. Those afflicted with carcinoma,[1] those requiring laparotomies and extirpation of the uterus, and those for other gynecological operations, as fistula, perineoplastic, colporraphy, etc. Connected with this department is the ambulance, through which all gynecological patients are received, those needing an operation being placed in the respective wards, others only requiring minor operations, massage, or simple treatment, being ordered to come as often as may be necessary. (3) The outdoor department or polyclinic. Besides this, a series of spacious rooms are reserved for Prof. von Winckel's private patients requiring major operations. Although this hospital was built in pre-antiseptic times (1853), it is fully equipped and the statistics, compiled from carefully kept records of all patients treated, are the very best; this shows that it has kept pace with institutions of the same character which are of much more recent construction.

The clinical staff, under the direction of Prof. von Winckel, consists of 4 assistants (salaried), 8 volunteer assistants (non-salaried), and a number of internes (coassistants). These latter being students in their final semesters have great opportunities of acquiring a vast amount of practical knowledge. At times there are more than 8 volunteer assistants, and no one can complain for want of abundant and interesting cases. One assistant is assigned to each department, the fourth has charge of the museum and conducts the pathological laboratories. The museum is complete, having many of the rarest monstrosities, a full collection of carefully preserved specimens of every known disease peculiar to the various parts and organs constituting the female genital apparatus, and last but not least, one of the finest collections of pathological female pelves to be found in the world.

In the obstetrical department, the annual average of births is about 11,000, of which the great majority are illegitimate, this latter being due to the fact that criminal abortion in this country is very rare, the laws being very strictly enforced and the offender severely punished. The sale of drugs that may produce abortion is forbidden and they are only to be had on the prescription of a legal practitioner. The work in the obstetrical department is conducted as follows: As soon as the parturient or pregnant woman comes in, she is examined by the physician on duty to see whether labor has actually begun; if not, she is either sent home, or, if confinement is expected within a short time, taken in to be occupied in the clinic, and also in the courses given to students in the methods for examination of the pregnant, and in acquiring manual dexterity. If she is found to be in labor, she is ordered to undress, the skin is examined for scabies, if found this is treated at once, and her clothes, before return at the time of discharge, properly disinfected. Pediculosis pubes, if found, is also treated at once, the parts being shaved. She then receives a bath under supervision of the midwife on duty, and is given a bed in the confinement chamber. Her history is taken, then her general health is inquired into, the lungs, heart, etc., examined, then abdominal examination follows and all conditions are carefully noted. I may here state that external examination, palpation, auscultation, and pelvimetry, ought to be much more generally impressed on the student's mind by teachers of obstetrics than it has in the past. With comparatively little practice, it is astonishing what dexterity one may acquire in diagnosing the exact position of the child, thus reducing internal examination to a minimum, not only to the mother's comfort, but also lessening the danger of sepsis through the accoucheur's fingers. I have learned to value the pelvimeter; it often enables one to foretell a prolonged case of labor when least expected by the general aspect of the patient. This holds good, especially in flat rhachitic pelves of a slight degree, when the history of the case gives no information. By taking accurate measurements of the pelvis we can diagnose slight contractions early in labor, and can inform the relatives of probable operative interference. This will only tend to strengthen the confidence of the patient in the physician, when, if the life of child or mother is endangered, the obstetrician states the necessity of such interference. This will often obviate the embarrassing situation when relatives, confronted with facts, hesitate and will not admit an operation until valuable time has been spent in calling consultation, thus loosing a living child.

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[1] By this is meant patients in which the disease is too far advanced to admit of radical operation, and who can only be treated by palliative methods, as the thermo-cautery, etc.

The examination of the parturient is concluded by the internal examination, after thorough disinfection of the hands and forearms of the operator, and the vulva and adjoining parts of the mother. Intravaginal disinfection was abandoned long ago, and is now only practised in cases of gonorrheal infection. The method of disinfecting the hands in this hospital is as follows: The nails, which are kept short and smooth, are cleaned dry at first. Hands and forearms are brushed in hot water with soap for three minutes, changing the water several times; this procedure is followed by brushing for two minutes in a solution of bichloride of mercury, 1:1000. The brush used is a large and hard one, not such as you find on a lady's toilet stand. Sublimate causes in some, at first, an eczema, but it generally passes away in a day or two, never to reappear. After disinfection of the hands *nothing* is touched—water faucets, bed clothes, or anything else. The midwife in attendance lifts the blankets; the physician with two fingers of one hand separates the labiæ, and introduces one or two fingers, not oiled, but direct out of the bichloride solution, of his other hand in the vagina, then the mother is covered again.[2] To each confinement, one or two students are admitted; the first one (*praktikant*), under direction of the physician on duty, makes all examinations, and receives such instructions as may be necessary; the second one (*auscultant*) is simply witnessing all that transpires, to become acquainted with the *modus operandi*, so that when his turn comes as *praktikant* he is better acquainted with the duties as such. For a candidate who presents himself to the Examiner, it is necessary to produce a certificate that he has conducted at least two births in a university hospital as *praktikant*, then having one birth in his examination, it makes three births at the very least by the time he enters life as an M. D., an example which ought to be followed by our schools, for how many students graduate that never have examined a pregnant woman, or witnessed or conducted a birth under guidance of a physician. After confinement, the lying-in woman is brought to the ward in which she remains for one week, when, providing everything runs a normal course, she is discharged. The diet during this time is chiefly soups and farinaceous foods, from the fourth day small portions of meat being allowed. *Post-partem* hemorrhage is treated with ergotin subcutaneously, no ergot being given by the mouth except in such cases where it is prescribed for want of tonicity in the uterine walls during the lying-in period, when it is given in the form of a weak infusion. Operative obstetrical cases, while not as numerous as in Saxony, the "home of rhachitis" are abundant, and the results highly satisfactory. While cases of this kind are generally accompanied by fever, I personally had not one case of fever in all the patients I have operated upon, and sometimes under the most unfavorable circumstances in the homes of the poor, during my polyclinic service. All this is due to the antiseptic precautions that I have learned to appreciate and observe. The gynecological wards are supplied with abundance of material, classified as already described. These patients are demonstrated by Professor Winckel during clinical lectures, as I shall state further on.

The out-door department, or polyclinic, treats gynecological patients and obstetrical cases that send for assistance. While most of the obstetrical practice is in the hands of licensed midwives, who have had a thorough training and passed an examination, there is still enough work for the obstetrician, as the midwife is compelled by law to send for a physician at once when any pathological factor is observed. She is not permitted to accept abortions and premature labors. She is also not allowed to treat a case of puerperal fever, and must call a physician as well as announce the fact to the medical police, when she may be suspended from service for 1 to 12 weeks for not observing antiseptic precautions. You can rest assured very little fever exists in their practice. Nearly all calls for assistance in obstetrical cases are from midwives, but many come from medical men, which shows that the clinic is held in high estimation by these, and that it does not interfere with their work in the least by only treating such cases as cannot afford to employ a physician. The gynecological outdoor cases are mostly treated at home, only those being transferred which require larger operations, that cannot be treated at their homes with due regard to asepsis. All operations in this clinic are made from 7 to 10 A. M. Laparotomies are performed in a special room for this purpose. Minor operations are made in the clinical lecture hall. Students witness all these operations.

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[2] If the fingers come in contact with any bedclothes accidentally, by the patient being restless or otherwise, the whole process of disinfection is repeated. Students are closely watched to observe this rule.

From 10–11 daily, Professor Winckel lectures on theory and practice of gynecology and obstetrics; the following hour is taken up by clinical lecture in the large hall. For this purpose 6–8 patients (obstetrical and gynecological, and also new-born children) are brought in, and each examined by a student called up, who goes into the history, etc., after which the lecturer goes systematically over the case and demonstrates it to all present. Pathological specimens (fresh) from the morning's operations, monstrosities, etc., are also presented and demonstrated, the former both macro- as well as microscopically, the latter by preparations made with the aid of the freezing microscope. The lecture rooms have been so overcrowded, that during the long vacations they are to be enlarged. In winter, Professor Winckel gives a course in obstetrical operations on the phantom (Schultze), in which the student gets all the instruction so valuable for his future practice at the bedside. The material used in these phantoms is dead children, preserved in a solution of bichloride of mercury in alcohol and water, with a small addition of glycerine. This innovation should be followed in our western schools, where the leather doll still flourishes. In summer, a course is given in gynecological operations on preserved genital apparatus taken *in toto* from female cadavers. These are placed in the Winckel-Schultze phantom, and serve in a most admiring manner to teach and acquire the finer *technique* of operations. This method of teaching was originated by Professor Winckel, and is adopted by most all of the German universities, but in America, I understand, only in the Jefferson Medical College, through the efforts of Professor Parvin. It ought to receive its due share of attention from American colleges, and also the practical exercises of cadaveric surgery, as this is the only means of demonstrating intelligently to the student the various steps of an operation, and does not confuse as when shown on the living, with the whole field of operation covered with blood.

The number of students receiving tuition in this hospital in the various courses number about 700 annually. There are also 75 to 100 women who receive free instruction in midwifery, the course lasting four months, from August until November, when they pass an examination and receive a license to practice.. The government requires these women to be natives of Bavaria, 20 to 30 years old, and to pass, before being admitted to the courses, a medical examination, to ensure that they are of healthy constitution; pregnancy does not exclude them, so long as they have more than four months to go until term. From the number of students in attendance, it may be judged how well the material serves to give them a superior education, and many chances for acquiring practical knowledge. Interesting cases are given out as subjects for dissertation to candidates for examination. All cases dying in the hospital are required by laws and regulations of the house to be subjected to an autopsy, which is made in the presence of the students. The advantages thus offered are apparent, and need no comment. The student has every opportunity to see the patient from the beginning of the treatment to the end: Commencing with the demonstration of the patient when entering the clinic; observation of treatment, operation, etc., with comment; presentation, when cured, before final discharge, or autopsy, in case of death ensuing.

Perhaps the other hospitals of Munich will interest you sufficiently, so that I may say a few words about them. The most recent hospital is the surgical clinic, which takes the place of the old Kraukenhaus, used by Nussbaum as a clinic. This institution is one of the model clinics in Germany, a fine building with all the latest improvements, under the direction of Professor Angerer. It can accommodate 450 patients. No ward has more than ten beds, some only six. The operating room is in the form of an amphitheatre, after v. Bergmann's, only much larger; has a marble floor; marble slabs on the walls; all benches and seats painted with white enamel paint, which admits of thorough disinfection. Instruments, bandages, etc., are kept in the adjoining sterilizing chamber, and only such instruments brought into the operating room as are required for the operation then in progress. The laboratory is worthy of note, every provision is made for bacteriological, chemical, and other researches, all expenses being carried by the institution; this also holds good in regard to the well-appointed clinic for internal medicine of Prof. v. Ziemssen. To this latter place are attached several polyclinics for diseases of the eye, ear, nose, and throat. Courses in physical and chemical diagnosis are given there at the bed-side by several professors of the university. The eye clinic of Prof. v. Rothmund, one of the oldest in Germany, is well attended; several lectures a day are given on diseases of the eye, clinical demonstrations, practical courses in operations on the eye (oxen and hogs' eyes in phantom; several times a week on human eyes, in the morgue) and opthalmoscopy. The hygienic institute, under Prof. v. Pettenkoffer, and the physiological institute under Professor Voit, are model institutions; as also the pathological institute, under Professor Bollinger. Visiting these places cannot but stimulate a man's ambition to be successful in getting an assistantship to these celebrated authorities; but this is easier wished than obtained, as for any vacancy on any university clinic or institute there are hundreds of applicants. The anatomical institute, under Professor Ruedinger, is one of the oldest buildings, and differs little from other places of this character. The Reisingerianum is devoted to a large number of polyclinics, and was founded by a physician named Dr. Reisinger. In this place many thousands of patients are treated annually, and the advanced students have many chances to perform minor operations. and to acquire a large experience in the treatment of diseases met with in daily practice.

In August, I shall take my position with Professor Sonnenburg, director of the surgical department of the City Hospital Moabit, of Berlin.

OSCAR J. MAYER.

MUNICH, June, 1892.

CORRESPONDENCE.

Sir: Under the heading "Medical Schools in Great Britain" the *Pacific Medical Journal* for October has a somewhat remarkable article. Remarkable for its objectlessness and ignorance of the relative standing of the various medical degrees and qualifications granted in Her Majesty's realm. The article is objectless in the first place because it is a mere jumble of clippings from the various calendars, giving no definite information to the intending student. Let me state here that by writing to any university or college in Great Britain one can get a complete printed schedule of the whole course of study, time of lectures, professors or teachers names, time of examinations, special rules for foreign physicians, etc., a mass of information which would take up a full number of your journal for each university or college. Thus, it seems a simple thing for any student or doctor to write and get first hand all the information he wants. In the second place, the article is misleading from an evident lack of knowledge on the part of the writer. For example, he speaks of the F. R. C. S. as a "degree," when no college can grant a "degree." Then he refers to the M. R. C. P., of London, as the highest English medical qualification, a statement which is manifestly absurd. As there is an evident misunderstanding of the whole matter, and as I have frequently had reason to correct mistakes in this regard, I beg your attention to the following short exposition of the subject in question. In Great Britain there are three classes of bodies having the right to confer on candidates registerable degrees and diplomas. These are in order of standing: (1) The Universities. (2) The Royal colleges. (3) Societies.

1. *The Universities* (Oxford, Cambridge, Edinburgh, Dublin, etc.)—Which alone have the power to grant degrees in contradistinction to licenses. The degrees granted are of two kinds: (*a*) Bachelor and Masterships, given at the end of the curriculum, and after successfully standing examinations. (*b*) Doctorates, the highest medical degree given in the United Kingdom. For this degree it is required that the condidate be at least 25 years of age, that he have a degree in arts, or have passed in addition to the ordinary preliminary examination, examinations in Greek and moral philosophy; that he has practised his profession for at least three years, and, lastly, that he write an original thesis on some subject in medicine. These, with some minor, local differences, are the rules of the universities. The degrees are initialed thus: M. B. (Bachelor

of Medicine), M. C. or C. M., or M. Ch. (Master in Surgery), and M. D. (Doctor in Medicine)

2. *The Royal Colleges* (of England, of Edinburgh, of Ireland).—A. Royal Colleges of Physicians. These grant: (*a*) licenses; (*b*) memberships; (*c*) fellowships, given in their order of difficulty of obtaining. Let me state here that the fellowship is a very high distinction reached by few. To verify this look at a medical directory for Great Britain, there you will find thousands of licentiates and members, but comparatively few fellows. The qualifications of the colleges of physicians are initialed thus: L. R. C. P. (Eng.) or (Edin.) or (I).

B. *Royal Colleges of Surgeons.*—These grant, in England, membership and fellowship; in Edinburgh and Ireland, licentiateships and fellowships. To make this plain, the membership of the Royal College of England is equivalent to having exactly the same examination as the licentiateship of the Royal Colleges of Edinburgh and Ireland. The fellowships here, as in the case of the Royal Colleges of Physicians, are only given on the most severe examination or honorarily, on account of very high medical or surgical distinction. A fellowship carries with it privileges, as voting for executive councils; being present at meetings; being interested in the business of the college; being present at the examination of candidates for membership or license; not having to pay carriage tax; wearing a cockade in coachman's hat, etc.

3. *Societies.*—Happily there is only one of these old bodies still in existence. *i. e.* The Worshipful Society of Apothecaries of London, which grants a license initiated L. S. A. This is the lowest standard examination for a registerable license, and is the last hope of the "chronic" student. The Society still holds its existence, in view of the fact that it is rich and therefore able to withstand attempts at its destruction. Within the last ten years there has been a tendency of the Royal Colleges of Physicians and Surgeons to issue a joint diploma by holding a single set of examinations. This is known as the "double qualification." In Scotland they have gone further, and give a "triple qualification." As can be easily understood this leads to a greater number of initials after the names of the holder of the diplomas. In England one sees M. R. C. S.; L. R. C. P., and occasionally L. M. (Licentiate in Midwifery), after the name of a practitioner, while, in Scotland, one may read the following string of letters: L. R. C. S.; L. R. C. P. and L. F. P. and S. G., which means Licentiate of the Royal College of Surgeons, Licentiate of the Royal College of Physicians of Edinburgh and Licentiate of the Faculties of Physicians and Surgeons of Glasgow. Finally, to make the matter clear, were a formal medical banquet to be given and those present seated by title, the order would be:

M. D.'s
{ M. B. & C. M.'s
{ F. R. C. P.'s & F. R. C. S.'s
M. R. C. P.'s
L. R. C. S.'s, L. R. C. P.'s, L. F. P. & S.G.'s
L. S. A.'s

I am, sir, yours, etc., ONE WHO HAS BEEN THROUGH THE MILL.

OBITUARY.

DR. A. H. AGARD.

DR. AURELIUS HOMER AGARD was born at Wadsworth, Medina county, Ohio, October 10, 1822. His parents were of New England, Puritan stock, and pioneers of Ohio. He received a good preparatory education at John McGregor's Academy, and also attended the Western Star Seminary, where he acquired a fair knowledge of the classics. He commenced his medical studies with Dr. Alexander Fisher, who, in 1846, practised at Western Star, Summit county, Ohio. Afterwards he attended two courses of lectures at the Cleveland Medical College, and graduated, after attending another course at Jefferson Medical College, Philadelphia, in 1849. In June of the same year he commenced to practise at Western Star, in partnership with his preceptor. In 1850 he bought out Dr. Fisher, and continued to practise until December, 1856, when he removed to Sandusky City, where he continued in the active duties of his profession until 1875. This year he removed to California, and on January 1, 1876, opened an office in the city of Oakland, where he continued in active practice until his death. In 1856 he reported a case of diffused aneurism of the femoral artery, operated on by Dr. Fisher, which is published in the *American Journal of the Medical Sciences* for April of that year. At various times he has written articles on medical subjects for different medical journals, and all of them evinced a clear and thorough knowledge of the topics on which he wrote. Transactions of State Societies where he has been a member, have also received valuable contributions from his pen. An article in one of the Pacific medical journals, on "Vaccine Lymph, Jennerian Bovine," was a most excellent and clear review of this subject. He was a member of the Erie County, Ohio, Medical Society, and was its Vice-President and acting President when he left Sandusky City; was also one of the Vice-Presidents of the Ohio State Medical Society, and a member of the Northwestern Medical Society of Ohio. He was a member, and has been President of the Alameda County Medical Association; was a member of the California State Medical Society, and has been one of its Vice-Presidents. He was a member of the Rocky Mountain Medical Association, formed for those who made the trip across the mountains to attend the meeting of the American Medical Society in San Francisco in 1871. He was also a member of the American Medical Association, and attended the meeting in San Francisco in 1871. He early took an active interest in microscopy, but few general practitioners being his equal in that branch of the profession. It is proper, and may be interesting, to turn to another feature, and notice a by-path of his career, in which his mental ability found congenial occupation. From his earliest years he was passionately fond of literature, and indulged this fondness more or less through life. Although his productions along this line made no dress-parade display in the serried ranks found on our book-shelves; yet, if what was written and published in the ephemeral columns of the daily press had been thrown into book form it would have made a creditable showing, both in amount and character. His first considerable effort in this line was a series of letters, published in the Sandusky, Ohio, *Daily Register*, entitled "Leaves from my Playground," written during one of his summer outings. These were so well received that they were followed by some twenty numbers, in the same chatty, playful spirit, entitled "Leaves from the Back Office." They were all floated over a *nom de plume*, and were received with much interest and pleasure by the public. In 1856, when he left his birth-place on the Connecticut Western Reserve, and located at Sandusky City, he at once became interested in and commenced the study of the local botany and geology of the region, and found the field rich in facts and specimens new to him. In his professional jauntings from place to place, gleaning as he went along, he soon so far mastered the field that he contemplated publishing a monograph of the botany of Sandusky Bay and vicinity, when a fire that destroyed the *Register* printing establishment, in which he owned a large interest, also consumed his offices and their entire contents. All his botanical specimens and manuscript were destroyed. He was also an enthusiastic student in the field of geology. In the flush days of Pithole city, he visited the oil fields of Ohio and Pennsylvania, and published his observations and something concerning the geology of petroleum. He also made several visits to the coal fields of Eastern Ohio, with a view of determining the value of the coal and its associated deposits of iron ores, fire clays, etc., and the practicability of bringing them by rail to the lake at or near Sandusky. As chairman of a committee of investigation, he reported favorably and urged capital to aid the enterprise. Long ago the roads were built and the mineral wealth of the regions visited is being developed, exceeding his sanguine expectations. Much of his fugitive efforts with the pen is found in letters of travel, in which he was peculiarly happy and often humorous, giving always interesting information relative to the business habits and customs of the people, natural history, etc. During a visit to California in 1868–9, when he spent eight months traveling over many of the most interesting portions of the State, he wrote some thirty letters of considerable length to the Sandusky *Register*, in which he gave one of the most truthful and life-like pen pictures of the country that had been published. The scenery, the topography, climate, geology, mineralogy, and flora; the modes and conditions of all business industries, the cosmopolitan character of the people and their habits were all studied and described in a most happy and instructive manner. The laborious part of his work in this field came upon him between the years 1862 and 1866, when, as one of the many derangements occasioned by the war, he was forced to assume, almost entirely, the editorial management of the Sandusky *Daily Register*, the only daily published in that Congressional district. This was done with signal ability, while engaged in an extensive professional business, and showed his versatility of talent as well as his fine abilities in whatever field of letters he turned his attention. In 1849, the doctor was united in marriage to Miss Hattie F. Cole, eldest daughter of Dr. Joseph Cole, who for forty years was an active practitioner of Akron, Ohio. She died in 1854, leaving one child, Helen L., now the wife of H. J. Epler, of Saratoga Springs, New York. In 1856, he married Miss May R. More, of Sharon, Medina county, Ohio, by whom he had four children, two sons and two daughters. Dr. Agard had within a few years preceding his death, met with sore affliction in the death of his wife and three children. The doctor was ever a careful, thorough, conscientious and able worker, and always gave his best efforts to the science of medicine and surgery, and for these reasons as well as for his superior ability, he was an honor and ornament to his chosen profession. He clearly belonged to a class of men who frequently, under difficulties, are the architects of their success and fortunes in life, and are examples in every respect worthy of emulation. Kind and affectionate with his family, true to his friends, always ready to assist the needy and deserving, earnest in purpose, honorable in all his transactions, modest and retiring in his manner, a close, careful and thorough student; by careful observation and sound judgment he discharged the duties of his profession conscientiously and intelligently. How well he succeeded in his life work, the estimation in which he was held by the profession, his extensive practice, and the encomiums that came to him in later years fully attested. Although complaining of not feeling well the day of his death, he visited his patients as usual in the morning, and was at his office at the regular afternoon hour. Having just finished prescribing for a patient, he fell from his chair upon the floor, and in less than five minutes breathed his last, August 31, 1892.

L. S. A.

REVIEWS AND NOTICES.

AN AMERICAN TEXT-BOOK OF SURGERY FOR PRACTITIONERS AND STUDENTS. By Charles H. Burnett, M. D.; Phineas S. Conner, M. D.; Frederick S. Dennis, M. D.; William W. Keen, M. D.; Charles B. Nancrede, M. D.; Roswell Park, M. D.; Lewis L. Pilcher, M. D.; Nicholas Senn, M. D.; Francis J. Shepherd, M. D.; Lewis A. Stimson, M. D.; William Thompson, M. D.; J. Collins Warren, M. D., and J. William White, M. D. Edited by William W. Keen, M. D., LL.D, and J. William White, M. D., Ph.D. Profusely illustrated. Philadelphia: W. B. Saunders; pp. xx–1210. Price, cloth, $7; sheep, $8; half Russia, $9.

Authors of surgical text-books have all along adhered to a stereotyped idea, or plan, in book-making. While recognizing that very many of the doctrines formerly taught have become obsolete, yet these same ideas have been accorded space on account of their historical interest. Hence it happens that volumes intended as practical clinical guides are much cumbered with matter, if not wholly useless, at least of doubtful value from our present standpoint What the student or practitioner of to-day most wants, is a reflex of the surgical methods of to-day as against those of one or a half-dozen decades ago. The editors of this work have taken a new departure in the matter of elimination and expurgation, and as a result they have given to the profession a text-book of *modern* surgery, the only surgery *de facto*. The volume is divided into four parts, the first of which is devoted to bacteriology, inflammation, processes of repair, and the so-called surgical diseases. Each chapter gives evidence of sincerity of purpose in its preparation, and clearly sets forth our present knowledge of the subject. The second part deals with special surgery, *e. g.*, of the vascular system, of the osseous system, of the nerves, of the joints. The third part is given up to regional, and the fourth to operative surgery. The aim throughout has been to bring out briefly, but clearly, the *technique* of the present time, not that of the past. Intra-articular injections of iodoform are endorsed in the treatment of tubercular joint diseases. Antiseptic irrigation is mentioned as an approved method in certain forms of synovitis. Nearly every operation now done in abdominal surgery is fully described, and has set upon it an estimate in accordance with the weight of modern opinion. The most available and popular of the many operations for the radical cure of hernia are made intelligible, and can be followed out by the average operator. The operative treatment of ap-

pendicitis is also fully discussed. Many of the illustrations have been specially prepared, and as a rule they are both accurate and artistic. The volume represents the work of a large number of authors, and in this connecton it is worthy of mention that each subject seems to have been treated more carefully and conscientiously than is usually the case with such compilations. It will certainly be found to be a valuable acquisition to the library of every working surgeon.

MEDICAL NEWS.

LICENTIATES OF THE BOARD OF EXAMINERS.

At a meeting of the Board of Examiners, held October 4, 1892, the following physicians having complied with the law and the regulations of this Board, were unanimously granted certificates to practise medicine and surgery in this State:

Joseph Dawson, San Francisco; Rush. Med. Coll., Ill., Feb. 17,'85.
Chas. S. Hart, Sacramento; Columbus Med. Coll., Ohio, Feb. 27,'77.
Enoch Neff, San Frandisco; Med. Dept. Univ. Michigan, June 28,'83.
Jas. A. Moore, Hanford; Univ. Louisville. Med. Dept., Ky., Feb. 25,'81.
S. E. Knight, Stockton; Bowdoin Coll , Maine, May 25,'92.
J. Thompson Steele, Stockton; St. Louis Coll. Phys. and Surgs., Mo., March 10,'91.

CHAS. C. WADSWORTH, Secretary.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the U. S. Army (Division of the Pacific), from September 20, 1892, to October 20, 1892.

S. O. 73, C. S., from these Hdq., is hereby modified to read as follows: Captain Lewis Brechemin, Assistant Surgeon, will report at the recruiting rendezvous in this city at 10 o'clock A. M. on Monday, Wednesday, and Friday of each week, and attend at the rendezvous until 1 P. M., or such less time as may be necessary for examination of recruits presented by the recruiting officer. Upon the completion of the duty required each day, Captain Brechemin will return to his station—the Presidio of San Francisco, Cal. S. O. 103, Dept. of California, September 29, 1892.

The journeys performed by Captain William W. Gray, Assistant Surgeon, from Wallace to Wardner, Idaho, and return, in obedience to S. O. 44, C. S., Hdq. U. S. troops, Wallace, Idaho, are confirmed. Par. 2, S. O. 151, Dept. of the Columbia, October 4, 1892.

The telegraph instructions of this date, directing 1st Lieutenant Thomas U. Raymond, Assistant Surgeon, to proceed immediately from Wallace, Idaho, to Fort Walla Walla, Wash., for temporary duty, upon being relieved by Captain William W. Gray, Assistant Surgeon, are confirmed. Par. 2, S. O. 153, Dept. of the Columbia, October 6, 1892.

The journey performed by 1st Lieut. Thomas U. Raymond, Assistant Surgeon, from Wallace to Wardner, Idaho, and return, on public business, in obedience to orders No. 6, C. S., Battalion 4th Infantry, Wallace, Idaho, is confirmed. Par. 4, S. O. 160, Dept. of the Columbia, October 14, 1892.

By authority of the Acting Secretary of War, 1st Lieut. Harlan E. McVay, Assistant Surgeon, will proceed from Fort Wingate, N. M., to the camp south of Bisbee, A. T., and report to Lieut.-Colonel J. W Barlow, corps of engineers, Commissioner of International Boundary Line Survey, for duty, relieving Captain E. A. Mearns, Assistant Surgeon, to enable him to comply with Par. 10, S. O. 229, C. S., A. G. O. Par. 1, S. O. 133, Dept. of Arizona, Oct. 20, 1892.

Lieutenant-Colonel Francis L. Town, Deputy Surgeon-General, is relieved from duty at the Presidio of San Francisco, Cal., and will report in person to the commanding officer, Fort Porter, N. Y. for duty at that station.

Major Egon Koedper, Surgeon, is relieved from duty at Fort Walla Walla, Wash., and will report in person to the commanding officer, Willet's Point, N. Y., for duty at that station, relieving Major Clarence Ewen, Surgeon.

Major Ewen, on being relieved by Major Koedper, will report in person to the commanding officer, Fort Walla Walla, Wash., for duty at that station.

Captain Eugene L. Swift, Assistant Surgeon, is relieved from duty at Fort Grant, A. T., and will report in person to the commanding officer, Fort Yates, North Dakota, for duty at that station.

Leave of absence for one month is granted Captain Henry P. Birmingham, Assistant Surgeon.

Captain William Stephenson, Assistant Surgeon, is relieved from duty at Fort Porter, N. Y., and ordered to Boise Barracks, Idaho, for duty at that station.

Captain Eugene L. Swift, Assistant Surgeon, promoted Captain, to date from August 12, 1892.

By direction of the Acting Secretary of War, Par. 3. S. O. 199, August 24, 1892, A. G. O., is revoked, and Captain Louis M. Maus, Assistant Surgeon, is relieved from duty at Fort Apache, A. T., and will report in person, without delay, to the commanding officer, Whipple Barracks, A. T., for duty at that station.

Major Middleton is relieved from duty at Fort Columbus, N. Y., and will report in person to the commanding officer of the presidio of San Francisco, Cal., for duty at that station.

ITEMS.

Dr. A. A. de Puy has removed from Grant's Pass, Oregon, to Smith's River, Cal.

Dr. George B. Somers has removed his office from 46 O'Farrell street, to 133 Larkin street, San Francisco.

Dr. A. Huffaker has removed from 1912 Fillmore street, San Francisco, to San Leandro, Alameda County, Cal.